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Investigating School Mathematics

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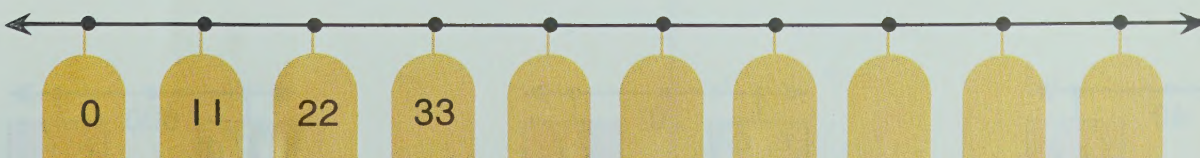
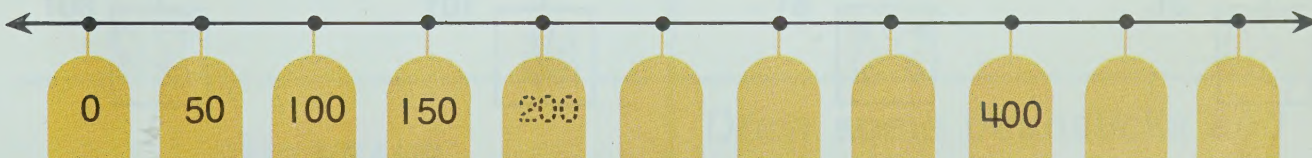
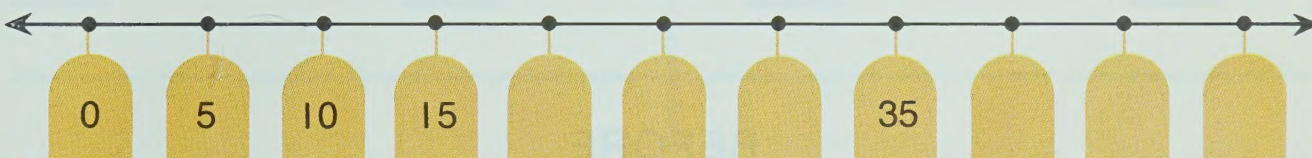
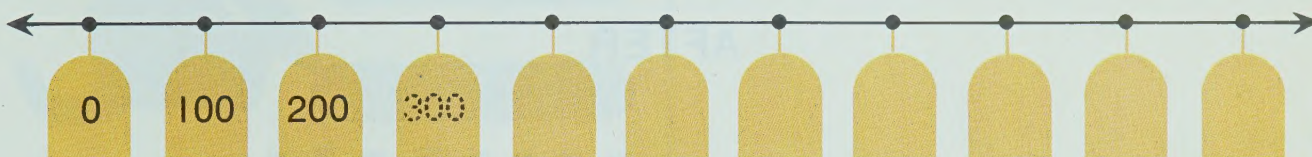
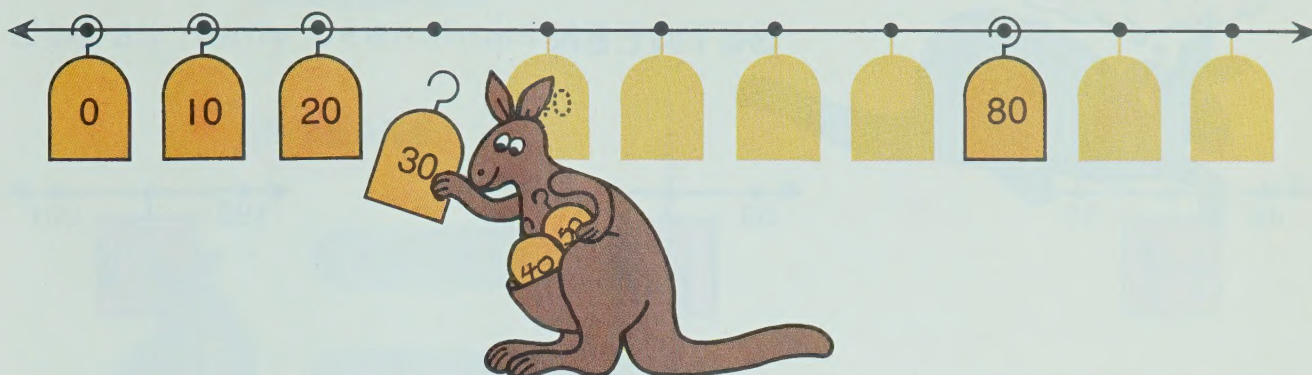
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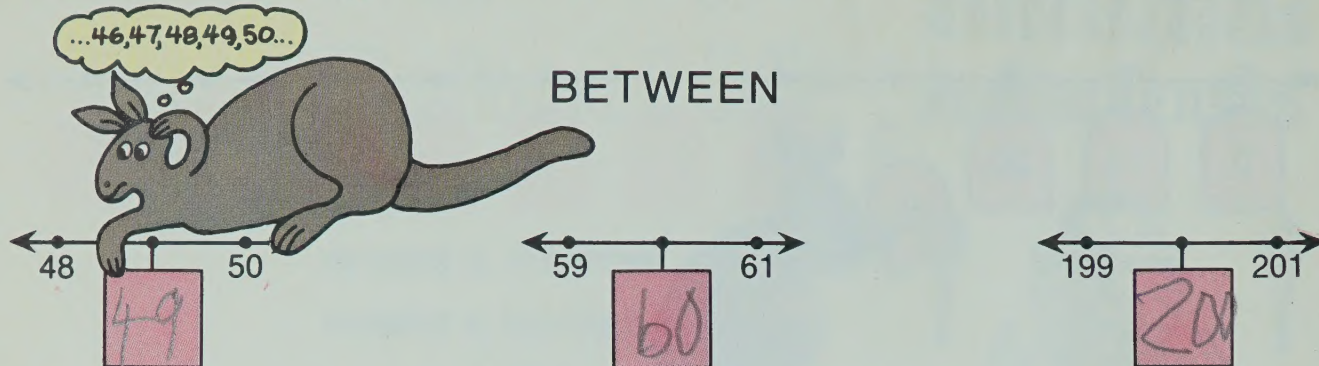
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2. The following terms should be used in recording the condition of the book: New; Good; Fair; Poor; Bad.

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Write the missing numerals.



Give the missing numerals.



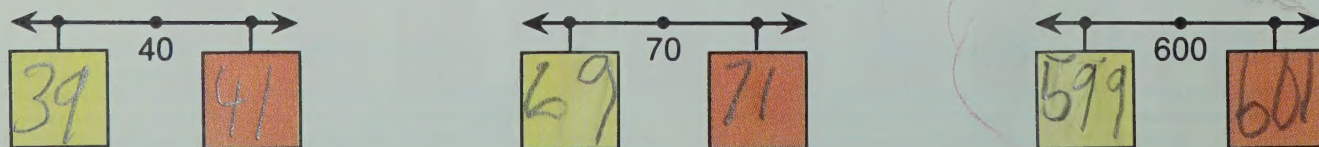
AFTER



BEFORE

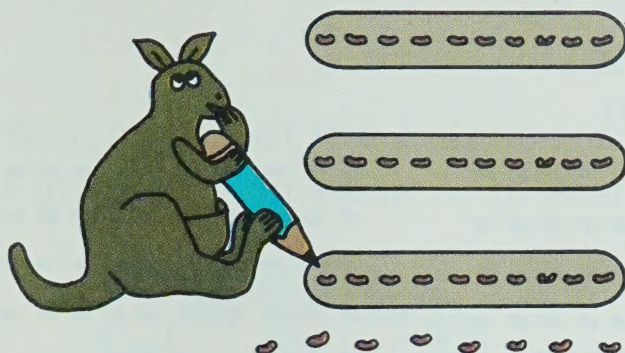


BEFORE and AFTER



Show the number of beans by drawing
beansticks () and extra beans
Use as many beansticks as you can.

38 BEANS



24 BEANS

47 BEANS

58 BEANS

113 BEANS

Draw some beansticks and
some beans.

How many beans in all? _____

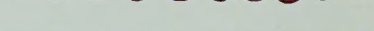
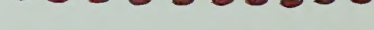
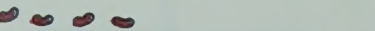
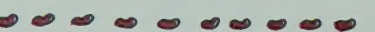
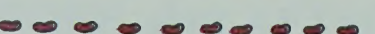
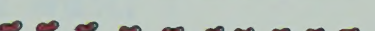
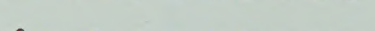
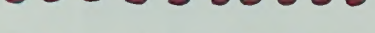
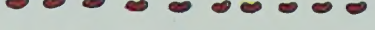
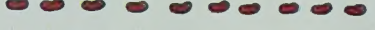
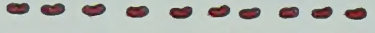
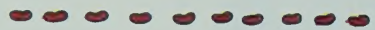
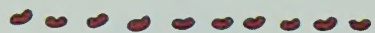
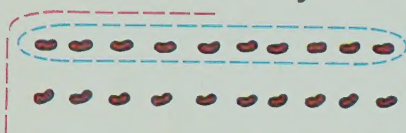


Put a around enough beans for a **beanstick**.

Put a around enough beansticks for a **box**.

Make as many beansticks as you can.

Make as many boxes as you can.



Boxes

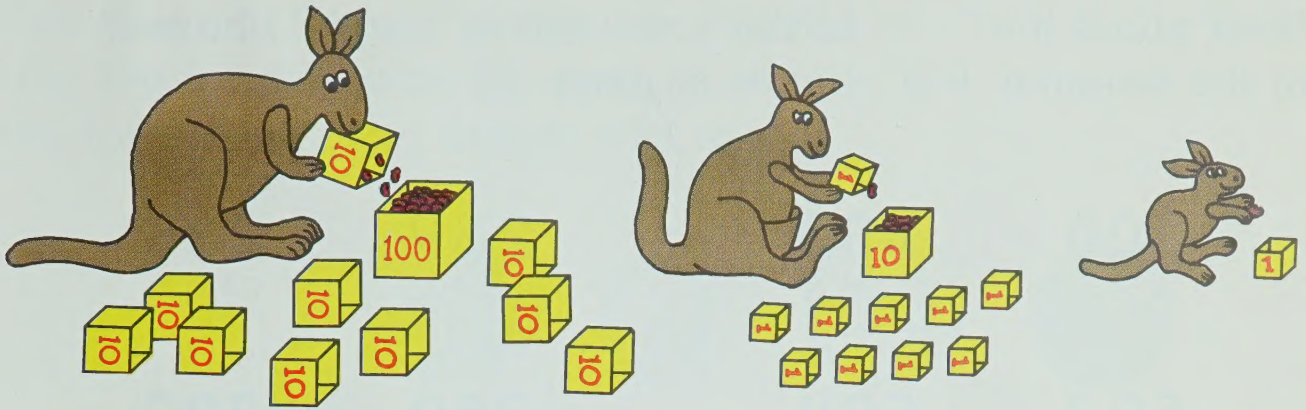


Extra
beansticks



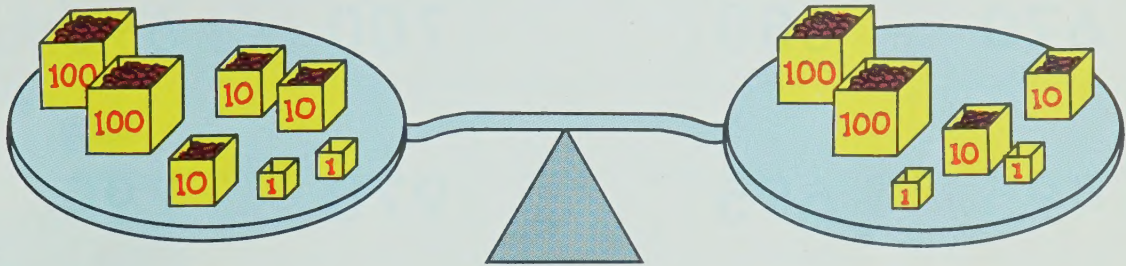
Extra
beans

beans in all.



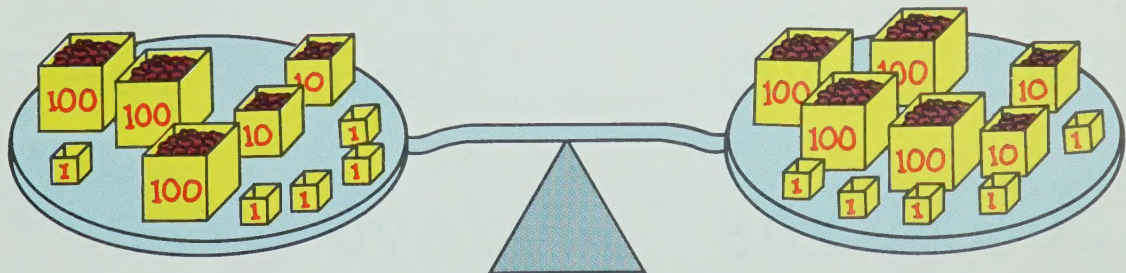
Which side of the balance is heavier?

Put $<$ or $>$ in each \triangle to show your answer.



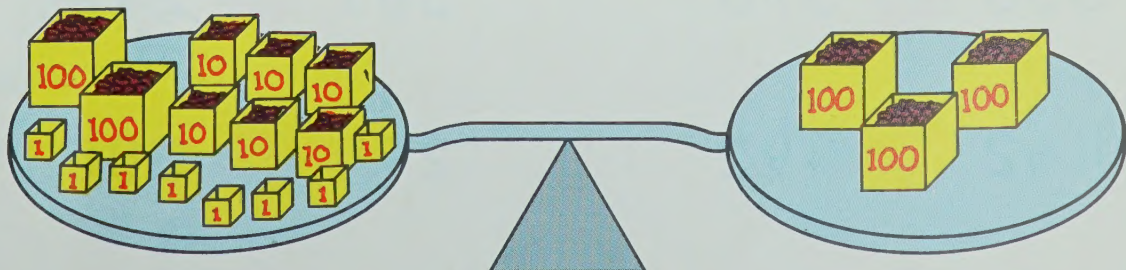
How many? $\frac{2}{\text{"100"}}$ $\frac{2}{\text{"10"}}$ $\frac{2}{\text{"1"}}$

How many? $\frac{1}{\text{"100"}}$ $\frac{1}{\text{"10"}}$ $\frac{1}{\text{"1"}}$




How many? $\frac{2}{\text{"100"}}$ $\frac{1}{\text{"10"}}$ $\frac{3}{\text{"1"}}$

How many? $\frac{1}{\text{"100"}}$ $\frac{1}{\text{"10"}}$ $\frac{3}{\text{"1"}}$



How many? $\frac{1}{\text{"100"}}$ $\frac{2}{\text{"10"}}$ $\frac{6}{\text{"1"}}$

How many? $\frac{2}{\text{"100"}}$ $\frac{0}{\text{"10"}}$ $\frac{0}{\text{"1"}}$

Think about the “100 boxes”, “10 boxes”, and “1 boxes” on the balance. Put $>$ or $<$ in each .

$$\begin{array}{ccc} 300 & \text{ } & 400 \\ 100 \text{ } 10 \text{ } 1 & & 100 \text{ } 10 \text{ } 1 \end{array}$$

$$\begin{array}{ccc} 239 & \text{ } & 235 \\ 100 \text{ } 10 \text{ } 1 & & 100 \text{ } 10 \text{ } 1 \end{array}$$

$$\begin{array}{ccc} 507 & \text{ } & 504 \\ 100 \text{ } 10 \text{ } 1 & & 100 \text{ } 10 \text{ } 1 \end{array}$$

$$\begin{array}{ccc} 380 & \text{ } & 320 \\ 100 \text{ } 10 \text{ } 1 & & 100 \text{ } 10 \text{ } 1 \end{array}$$

$$\begin{array}{ccc} 670 & \text{ } & 680 \\ 100 \text{ } 10 \text{ } 1 & & 100 \text{ } 10 \text{ } 1 \end{array}$$

$$\begin{array}{ccc} 700 & \text{ } & 690 \\ 100 \text{ } 10 \text{ } 1 & & 100 \text{ } 10 \text{ } 1 \end{array}$$

$$\begin{array}{ccc} 495 & \text{ } & 695 \\ 100 \text{ } 10 \text{ } 1 & & 100 \text{ } 10 \text{ } 1 \end{array}$$

$$\begin{array}{ccc} 970 & \text{ } & 790 \\ 100 \text{ } 10 \text{ } 1 & & 100 \text{ } 10 \text{ } 1 \end{array}$$

$$900 \text{ } 600$$

$$153 \text{ } 158$$

$$206 \text{ } 208$$

$$690 \text{ } 680$$

$$530 \text{ } 570$$

$$387 \text{ } 298$$


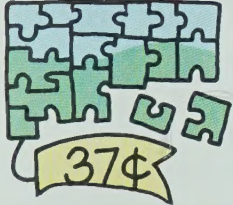


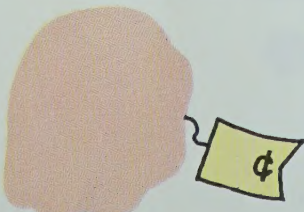
$$462 \text{ } 492$$


$$294 \text{ } 300$$

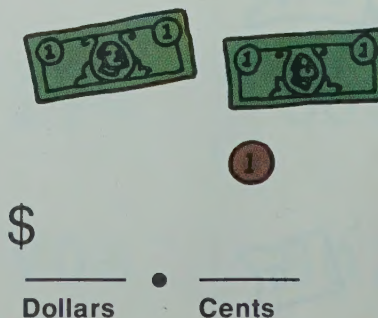
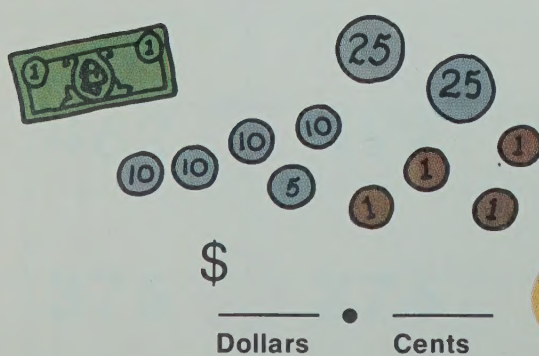
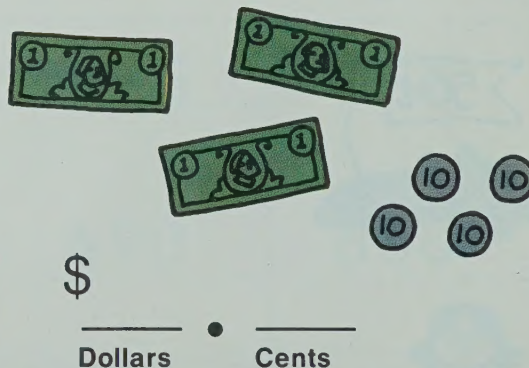
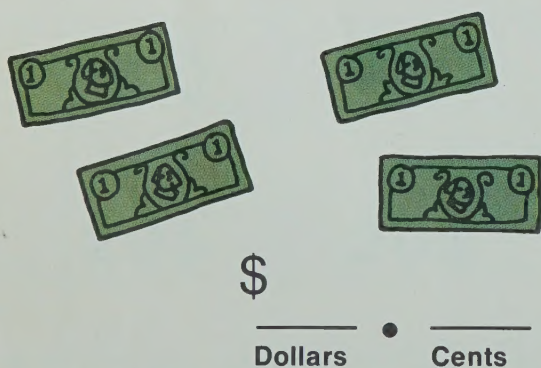
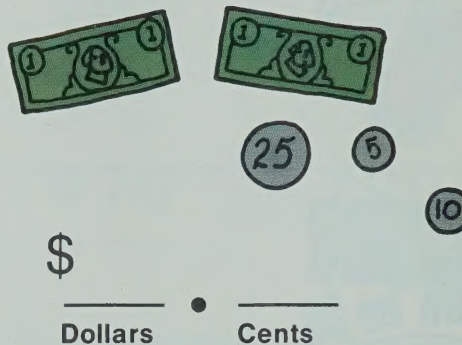
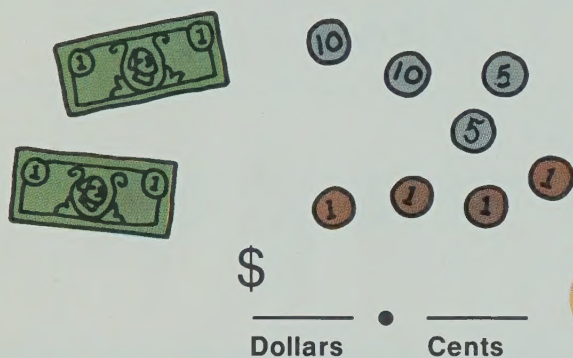
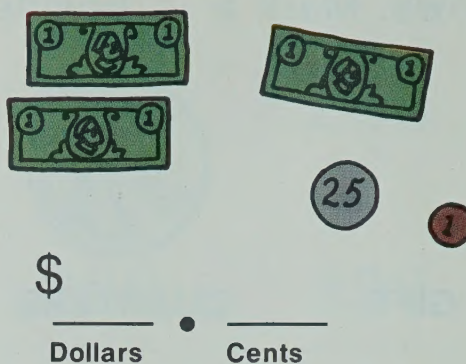
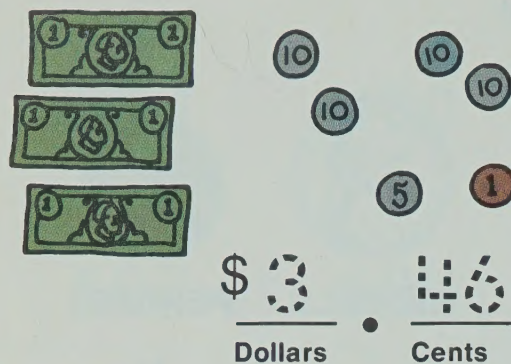
$$376 \text{ } 276$$

$$906 \text{ } 807$$

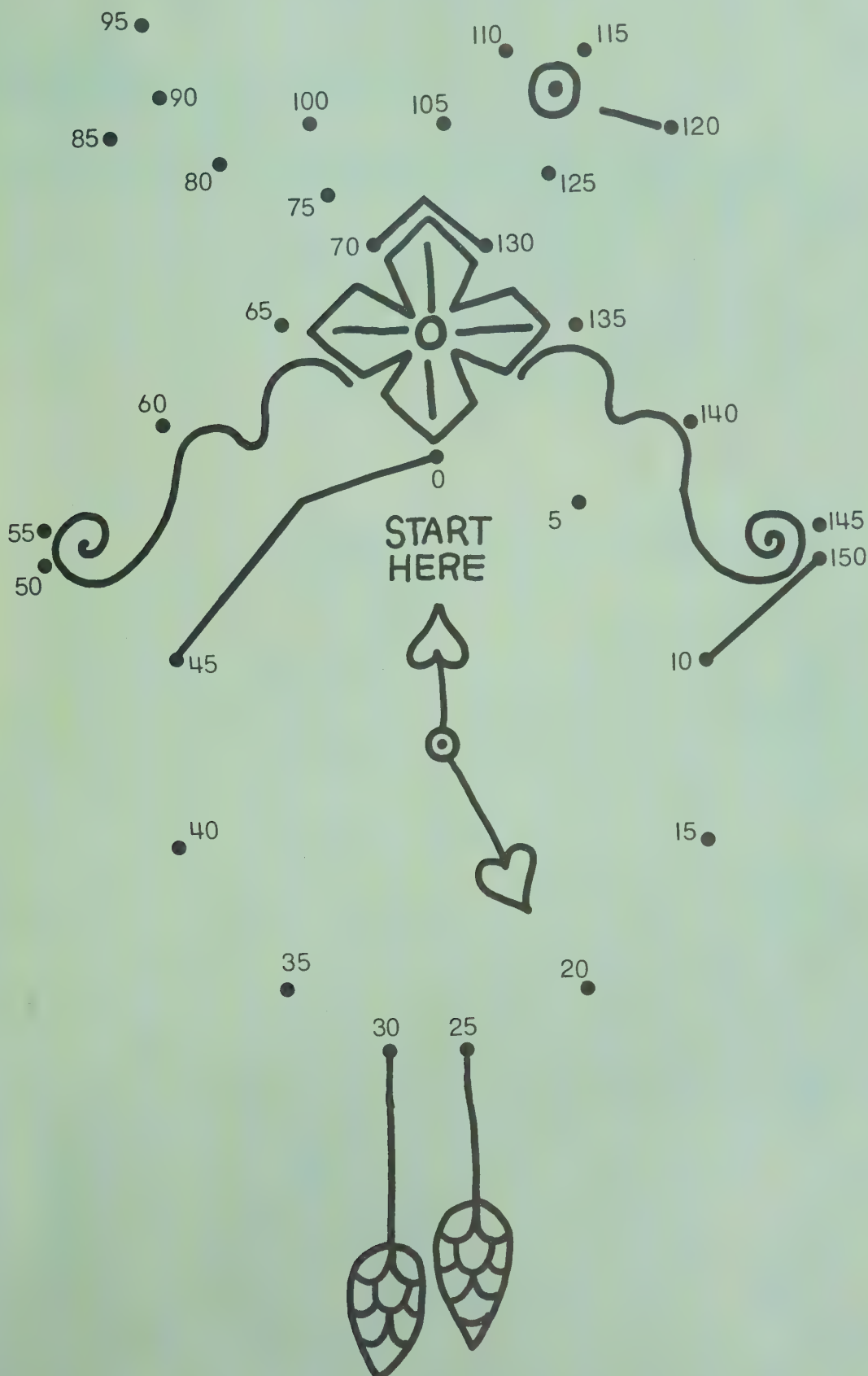
Can you find 3 ways to buy each gift?
Use the fewest possible coins in one of
the rows. Mark a ✓ beside this row.

GIFT	QUARTERS	DIMES	NICKELS	PENNIES	
		2	1	4	✓
					
					
					
Your choice 					

How much money? Put $>$ or $<$ in each  to show which has more.



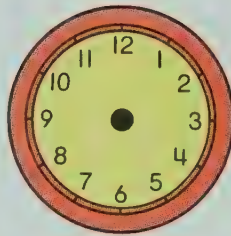
Connect the dots. Count by 5's.



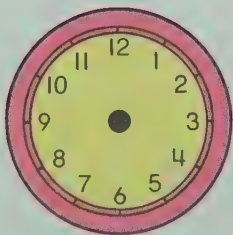
Draw a picture of something you do.
Show the time you do it on the clock.
Then write the time.



Time _____



Time _____

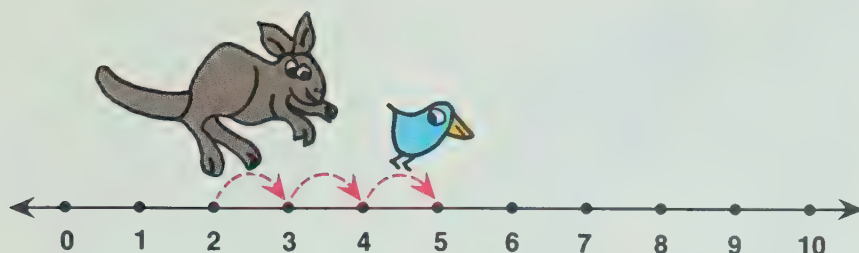


Time _____



Time _____

Draw some jumps. Complete the equation.



$$2 + 3 = 5$$



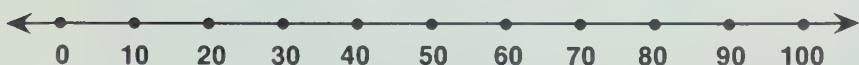
$$10 + \square = \square$$



$$400 + \square = \square$$



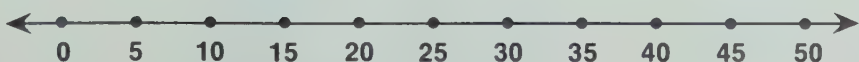
$$0 + \square = \square$$



$$40 + \square = \square$$

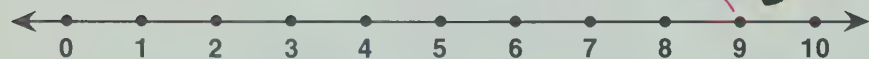


$$100 + \square = \square$$



$$5 + \square = \square$$

Draw some jumps. Complete the equation.



$$9 - \square = \square$$



$$60 - \square = \square$$



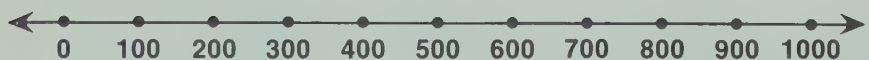
$$800 - \square = \square$$



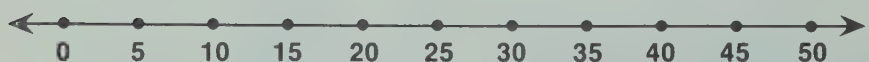
$$10 - \square = \square$$



$$90 - \square = \square$$

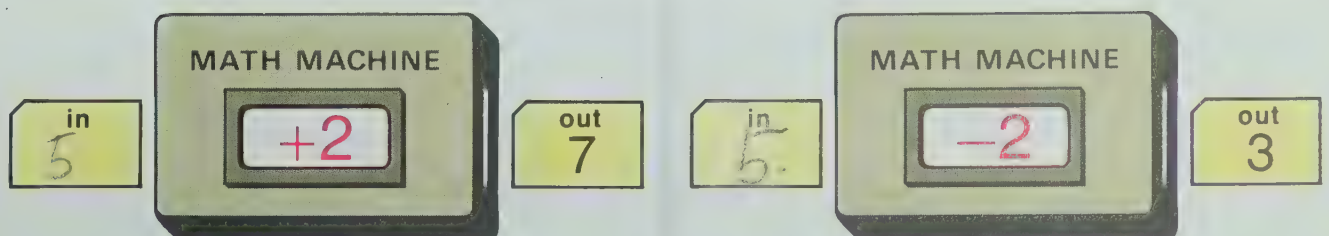
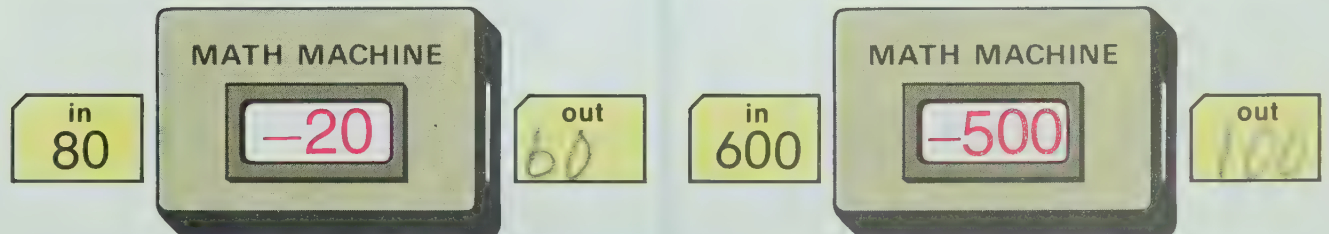
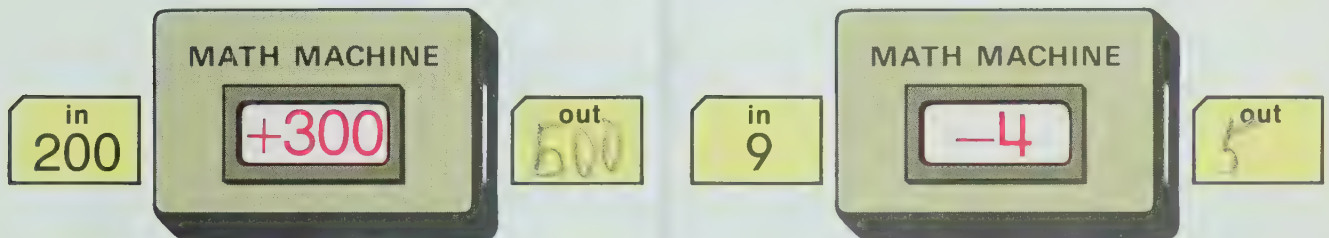
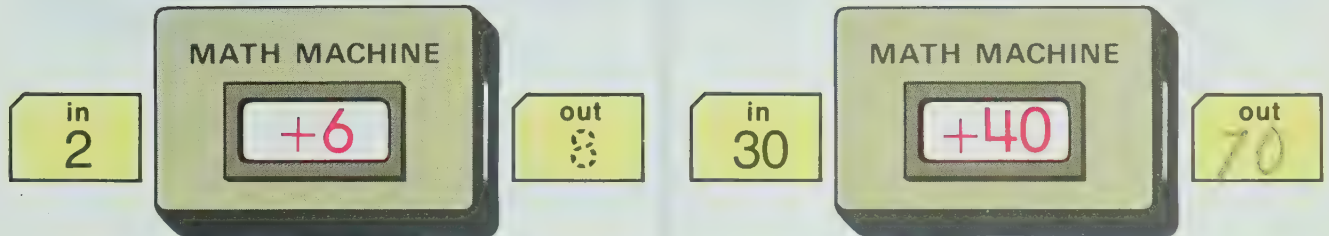
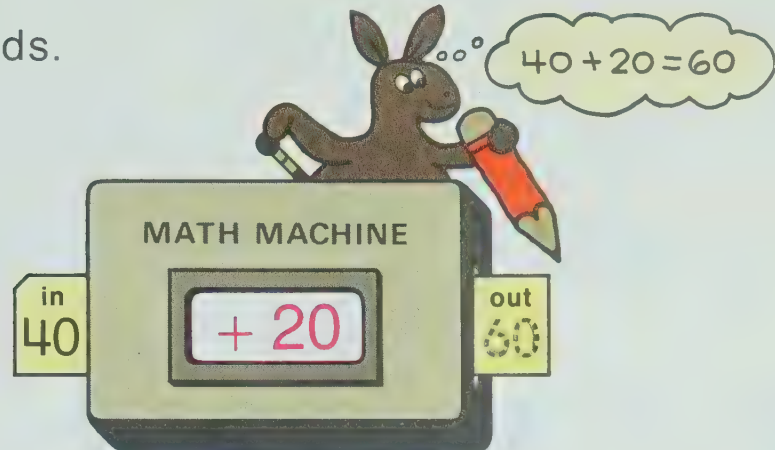


$$700 - \square = \square$$


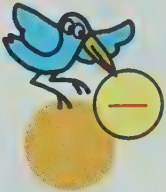

















$$50 - \square = \square$$

Complete the cards.



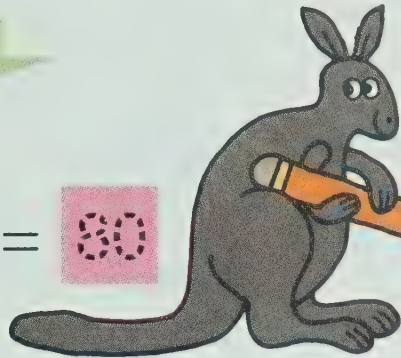
Make some equations of your own.

30 40 50 60 70 80	+ -	10 20 30 40 50 60
		
_____		_____ = 
_____		_____ = 
_____		_____ = 
_____		_____ = 
_____		_____ = 
_____		_____ = 
_____		_____ = 

Write 50, 60, 70, 80,
90, or 100 in the .
Then solve the equation.

Write a subtraction
equation that goes with
the addition equation.

60 + 20 = 80



80 - 20 = 60

+ 10 =



+ 30 =



+ 40 =



+ 20 =



+ 50 =






Complete the equation for every short story.
Then solve the problem.

1. Ted had 7 dogs in a pen.

He could see 4.




How many were hiding? _____


 $+$

 $=$


5. Mother had 9 cookies.

3 were on a plate.




How many in the jar? _____


 $+$

 $=$


2. 10 birds landed in a tree.

Sue could see 6.


How many were in the birdhouse? _____


 $+$

 $=$


6. Jan had 6 fish.

She could see 4.

How many were in the castle? _____




 $+$

 $=$


3. Eric gave Jon 8 marbles.

Jon could see 5.

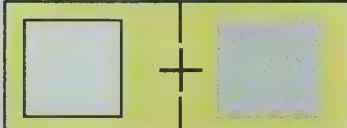


How many were in the bag? _____


 $+$

 $=$


7. A dominoe has 7 spots.

One end has 3 spots.

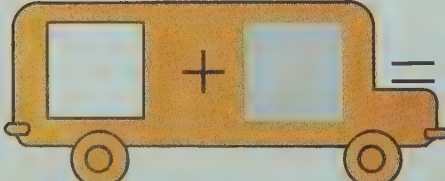


How many spots on the other end? _____


 $+$

 $=$


4. 8 people in a car.

2 are in the front seat.



How many in the back? _____


 $+$

 $=$


8. 20 students in Jack's class.

5 stayed home.

How many at school? _____


 $+$

 $=$

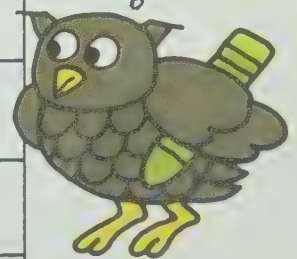

1. Fill in each gray square.
2. Find two "same number" squares.
Fill them in and color them the same color.
Do this until the table is complete.
Use as many different colors as you can.

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										

2 + 9 = 11
and
9 + 2 = 11



5 + 7 = 12
and
7 + 5 = 12



Solve the equations.

$$4 + \square = 9$$

$$7 + \square = 13$$

$$5 + \square = 9$$

$$6 + \square = 13$$

Find the sums.

20	10	→ 30
30	20	→ 50
50	30	→

30 + 50 = ?
50 + 30 = ?



50	20	→
40	30	→
		→

Make your own.

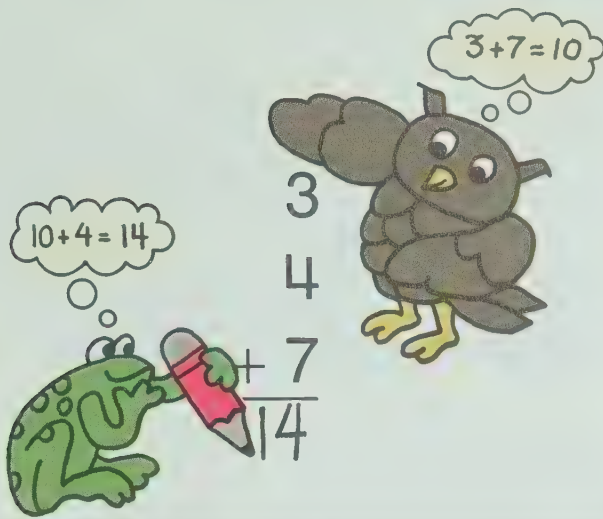
60	30	
20	40	

Find the missing numbers.

20		50
60		100

	40	
		60
80		130

Find the sums. Look for 10's.



$$\begin{array}{r} 4 \\ 6 \\ + 7 \\ \hline \end{array}$$

10

$$\begin{array}{r} 2 \\ 5 \\ + 8 \\ \hline \end{array}$$

10

$$\begin{array}{r} 4 \\ 6 \\ 7 \\ + 3 \\ \hline \end{array}$$

10

10

$$\begin{array}{r} 5 \\ 3 \\ 5 \\ + 7 \\ \hline \end{array}$$

10

10

$$\begin{array}{r} 8 \\ 2 \\ 4 \\ + 6 \\ \hline \end{array}$$

10

10

$$\begin{array}{r} 9 \\ 6 \\ 1 \\ + 2 \\ \hline \end{array}$$

10

$$\begin{array}{r} 6 \\ 7 \\ 4 \\ 3 \\ + 5 \\ \hline \end{array}$$

10

10

$$\begin{array}{r} 8 \\ 7 \\ 3 \\ 2 \\ + 1 \\ \hline \end{array}$$

10

10

$$\begin{array}{r} 6 \\ 5 \\ 3 \\ 4 \\ + 5 \\ \hline \end{array}$$

10

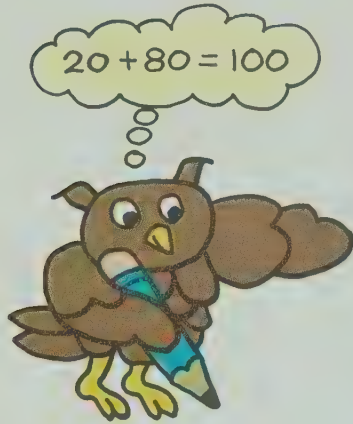
10

$$\begin{array}{r} 9 \\ 1 \\ 7 \\ 3 \\ + 6 \\ \hline \end{array}$$

10

10

Find the sums. Look for 100's.



$$\begin{array}{r} 20 \\ 80 \\ + 70 \\ \hline 170 \end{array}$$

$$\begin{array}{r} 50 \\ 30 \\ + 70 \\ \hline \end{array}$$

100

$$\begin{array}{r} 90 \\ 40 \\ + 10 \\ \hline \end{array}$$

100

$$\begin{array}{r} 30 \\ 70 \\ 20 \\ + 80 \\ \hline \end{array}$$

100

100

$$\begin{array}{r} 90 \\ 20 \\ 10 \\ + 80 \\ \hline \end{array}$$

100

100

$$\begin{array}{r} 60 \\ 70 \\ 40 \\ + 10 \\ \hline \end{array}$$

100

$$\begin{array}{r} 50 \\ 10 \\ 50 \\ + 90 \\ \hline \end{array}$$

100

100

$$\begin{array}{r} 60 \\ 70 \\ 40 \\ 30 \\ + 80 \\ \hline \end{array}$$

100

100

$$\begin{array}{r} 50 \\ 10 \\ 70 \\ 90 \\ + 50 \\ \hline \end{array}$$

100

100

$$\begin{array}{r} 50 \\ 30 \\ 50 \\ 40 \\ + 70 \\ \hline \end{array}$$

100

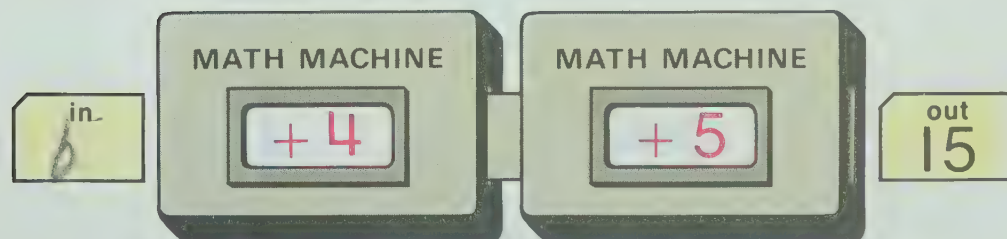
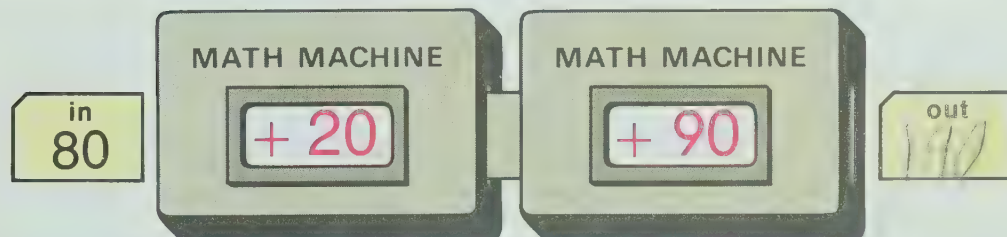
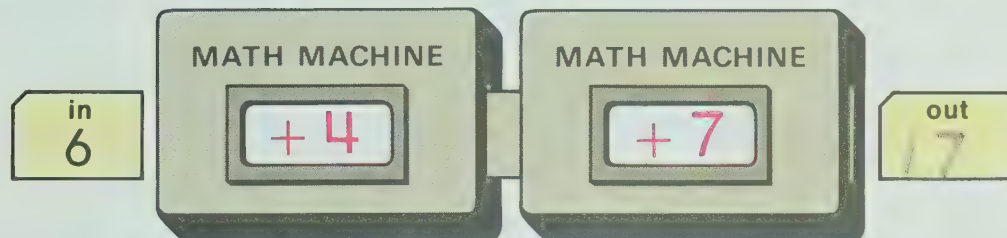
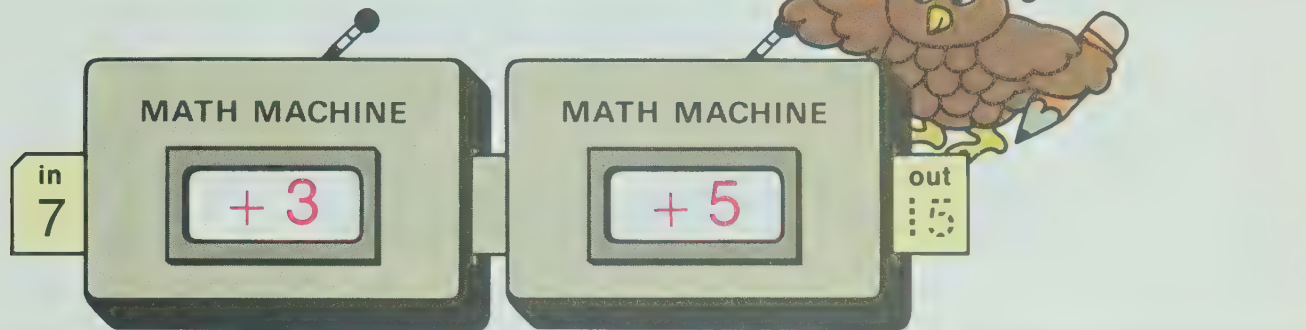
100

$$\begin{array}{r} 80 \\ 70 \\ 20 \\ 10 \\ + 20 \\ \hline \end{array}$$

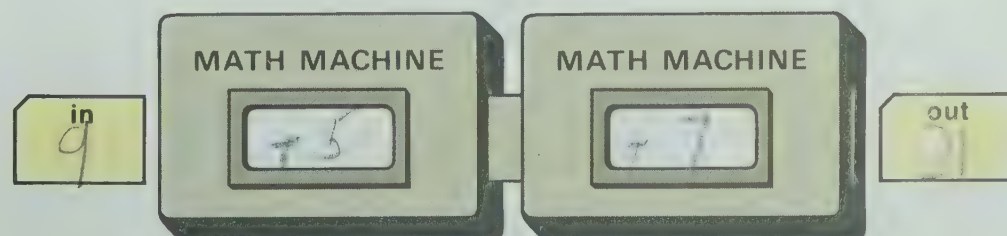
100

100

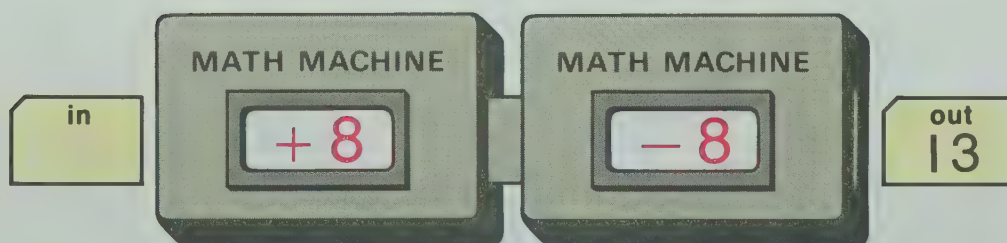
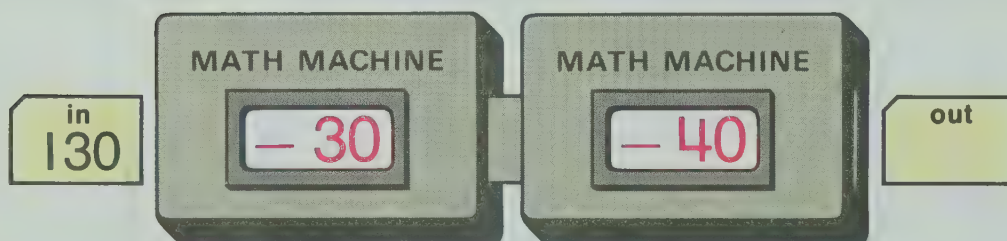
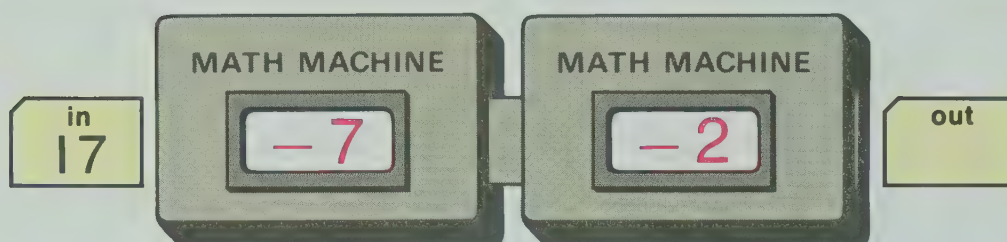
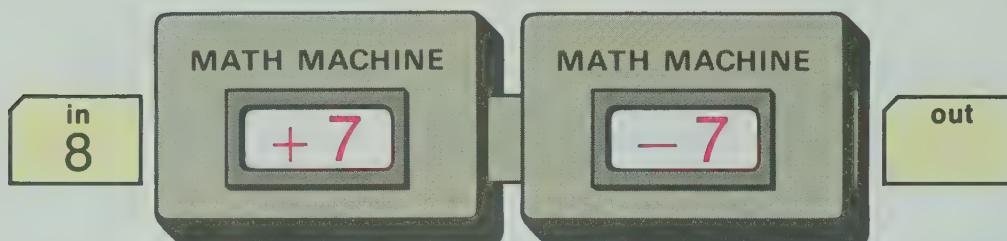
Two “math machines” are hooked together
Give the missing numbers.



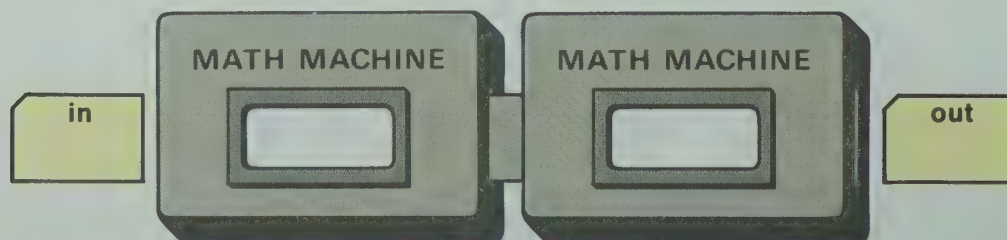
Choose your own numbers.



Give the missing numbers.



Choose your own numbers.



Each equation can be used to solve a “short story” problem.
Write your own “short story” and solve the equation.
You can draw a picture if you wish.

Short story:

Tom had 7 cents.

He found 4 cents.

How much in all?



$$7 + 4 = \square$$

Short story:

$$16 - 7 = \square$$

Short story:

$$8 + 9 = \square$$

Short story:

$$13 - 9 = \square$$

Can you find the mystery number ?



If you add me
to 8, you get 12.
Who am I?



If you subtract
me from 15,
you get 9.

Who am I?



If you add me
to myself, you get 20.
Who am I?

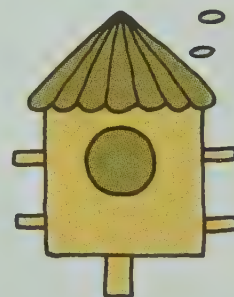


If you double
me and add 1,
you get 17.
Who am I?








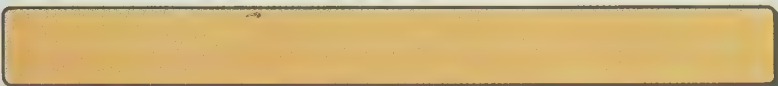
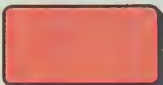
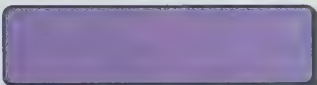
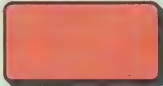

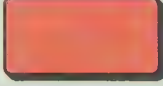
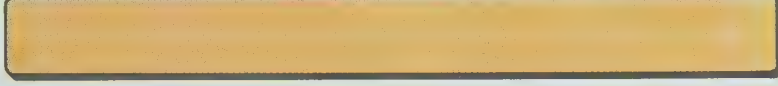
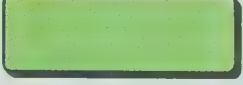
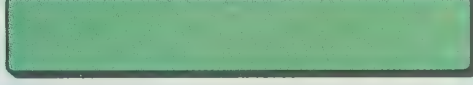
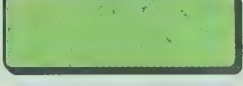

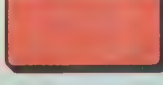



If you subtract
me from 17,
you get 9.

Who am I?



Make a "mystery problem" of your own.

Complete the table.

If this is the UNIT,	the length of the strip is 
	 
	
	
	
	
	
	
	
	

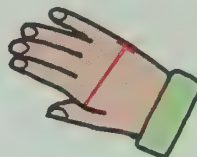
About how long?

Your shoe



About ____ inches.
About ____ centimeters.

Your hand



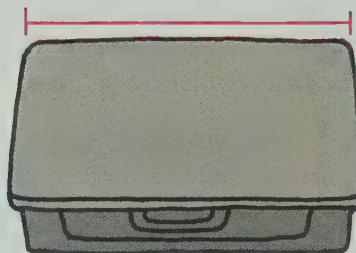
About ____ inches.
About ____ centimeters.

Foot ruler



About ____ inches.
About ____ centimeters.

Desk or Table



About ____ inches.
About ____ centimeters.

Your height



About ____ inches.
About ____ centimeters.

Yard stick



About ____ inches.
About ____ centimeters.

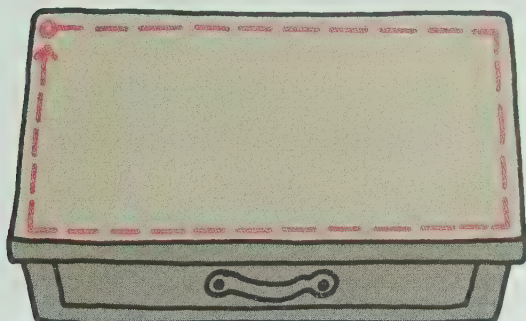
Find some things to measure and draw them.
Then tell about how long they are.

About ____ inches.
About ____ centimeters.

About ____ inches.
About ____ centimeters.

About how far is it around each object?

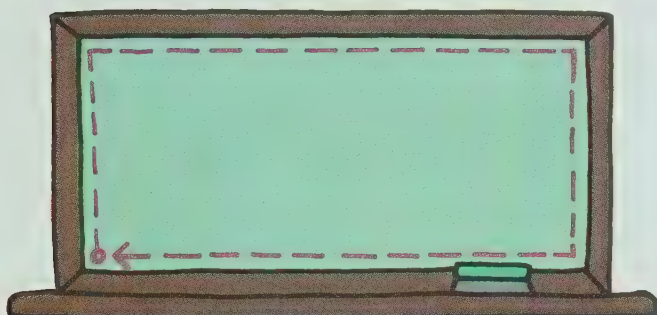
YOUR DESK



_____ inches

_____ centimeters

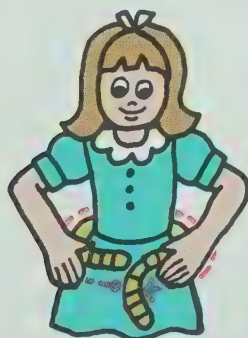
THE CHALKBOARD



_____ feet

_____ yards

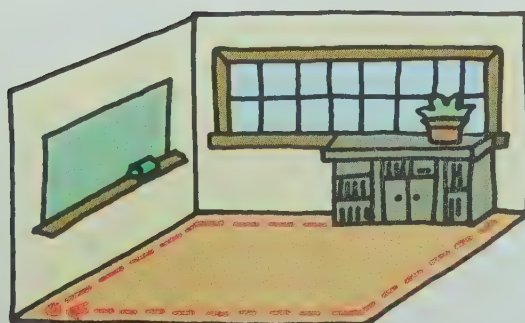
YOUR WAIST



_____ inches

_____ centimeters

YOUR ROOM

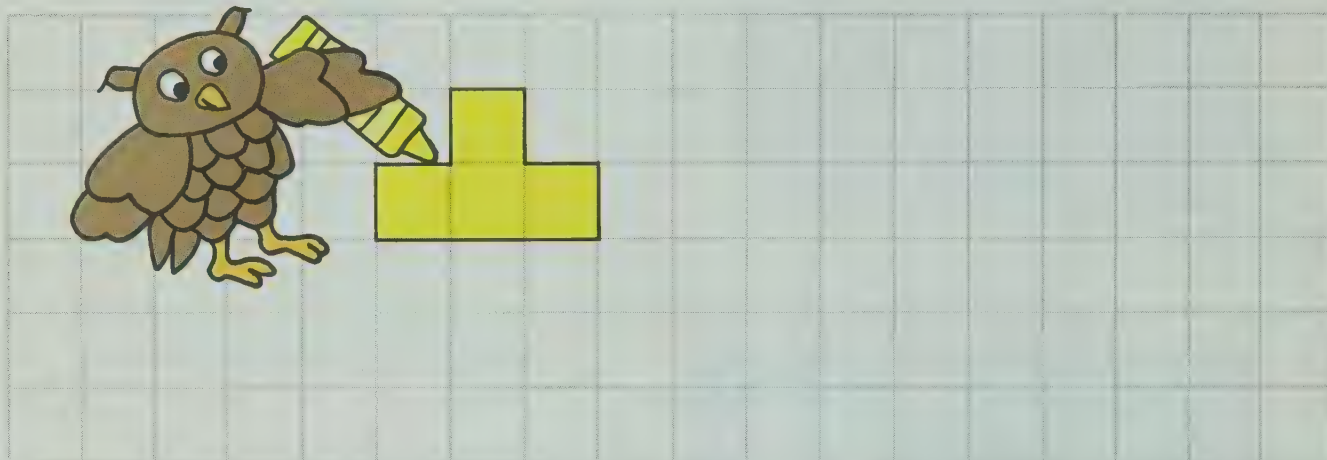


_____ feet

_____ yards

_____ meters

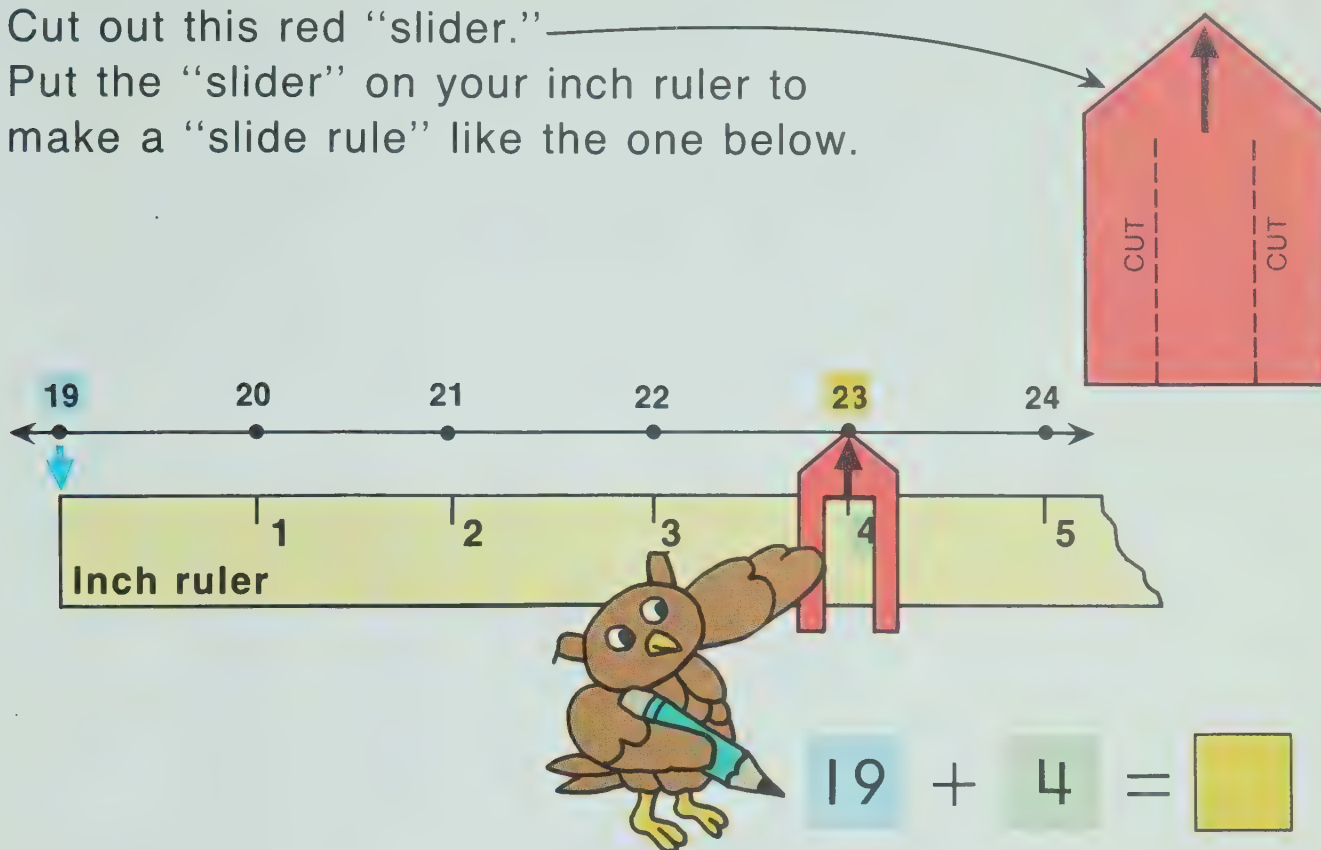
Look at the “4 square island” below. Notice that each square touches another square along a side. Draw and color as many differently shaped “4 square islands” as you can.



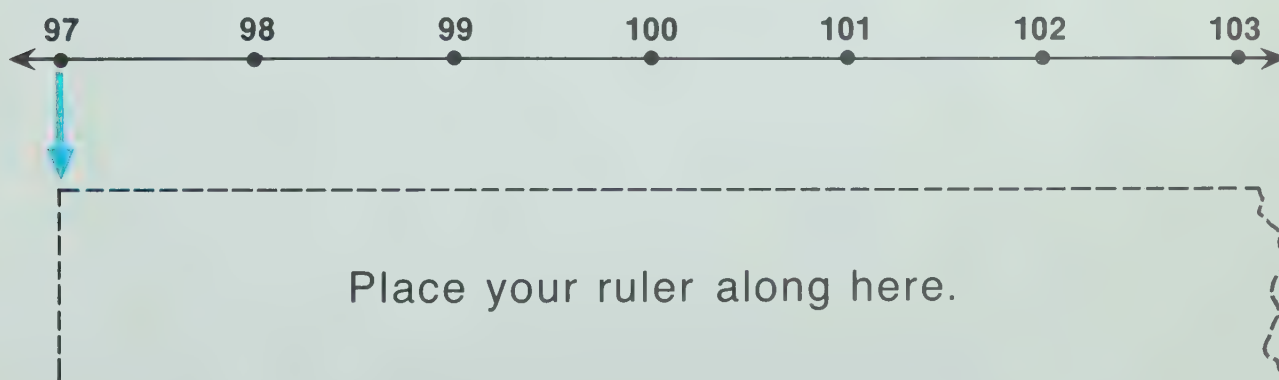
Here is a “5 square island.” How many differently shaped “5 square islands” can you draw and color?



Cut out this red “slider.”
Put the “slider” on your inch ruler to
make a “slide rule” like the one below.



Use your “slide rule” and the number line
below to solve the equations.



$$97 + 2 = \square$$

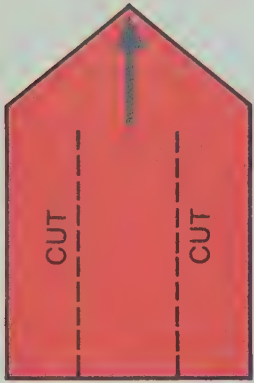
$$97 + 6 = \square$$

$$97 + 3 = \square$$

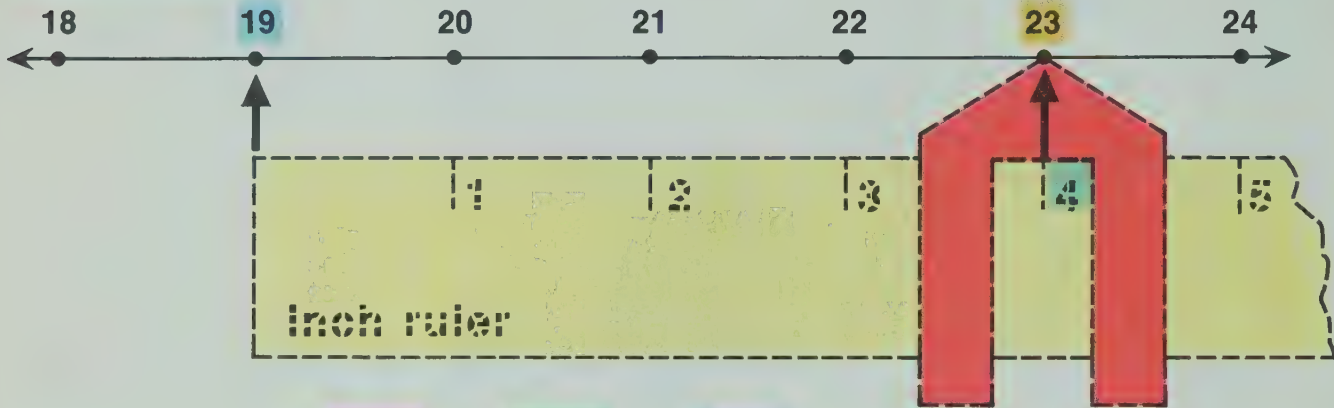
$$97 + 1 = \square$$

$$97 + 4 = \square$$

$$97 + 5 = \square$$



Use your “slide rule” and the number lines below to solve the equations. The first picture shows you how to subtract by reading your “slide rule” backwards.

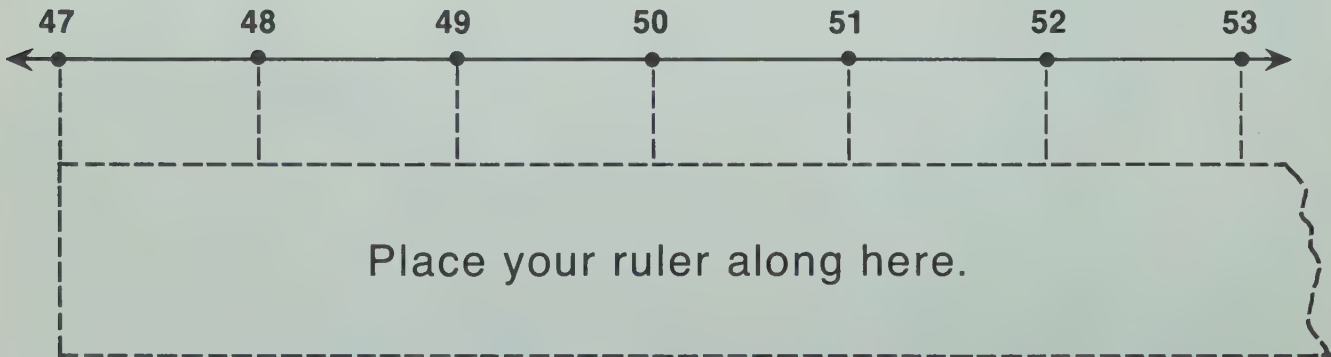


$$23 - 4 = \square$$

$$23 - 5 = \square$$

$$22 - 3 = \square$$

$$24 - 5 = \square$$



$$47 + 4 = \square$$

$$52 - 3 = \square$$

$$48 + 3 = \square$$

$$47 + 6 = \square$$

$$53 - 5 = \square$$

$$51 - 4 = \square$$

Write the numeral for each .

$$\begin{array}{r} 35 \\ + \boxed{} \\ \hline 67 \end{array}$$

$$\begin{array}{r} 54 \\ + \boxed{} \\ \hline 78 \end{array}$$

$$\begin{array}{r} \boxed{}\boxed{} \\ + 37 \\ \hline 79 \end{array}$$

$$\begin{array}{r} \boxed{}4 \\ + 2\boxed{} \\ \hline 86 \end{array}$$

$$\begin{array}{r} 4\boxed{} \\ + 33 \\ \hline \boxed{}8 \end{array}$$

$$\begin{array}{r} 1\boxed{} \\ + \boxed{}5 \\ \hline 69 \end{array}$$

$$\begin{array}{r} 42 \\ + \boxed{}7 \\ \hline 7\boxed{} \end{array}$$

$$\begin{array}{r} \boxed{}4 \\ + 4\boxed{} \\ \hline 99 \end{array}$$

$$\begin{array}{r} 79 \\ - \boxed{}\boxed{} \\ \hline 45 \end{array}$$

$$\begin{array}{r} 97 \\ - \boxed{}\boxed{} \\ \hline 35 \end{array}$$

$$\begin{array}{r} \boxed{}7 \\ - 4\boxed{} \\ \hline 55 \end{array}$$

$$\begin{array}{r} \boxed{}6 \\ - 2\boxed{} \\ \hline 72 \end{array}$$

$$\begin{array}{r} 9\boxed{} \\ - \boxed{}3 \\ \hline 76 \end{array}$$

$$\begin{array}{r} \boxed{}4 \\ - 21 \\ \hline 6\boxed{} \end{array}$$

$$\begin{array}{r} \boxed{}\boxed{} \\ - 23 \\ \hline 56 \end{array}$$

$$\begin{array}{r} 7\boxed{} \\ - \boxed{}6 \\ \hline 63 \end{array}$$

Find the sums for the **MAGIC SQUARES**

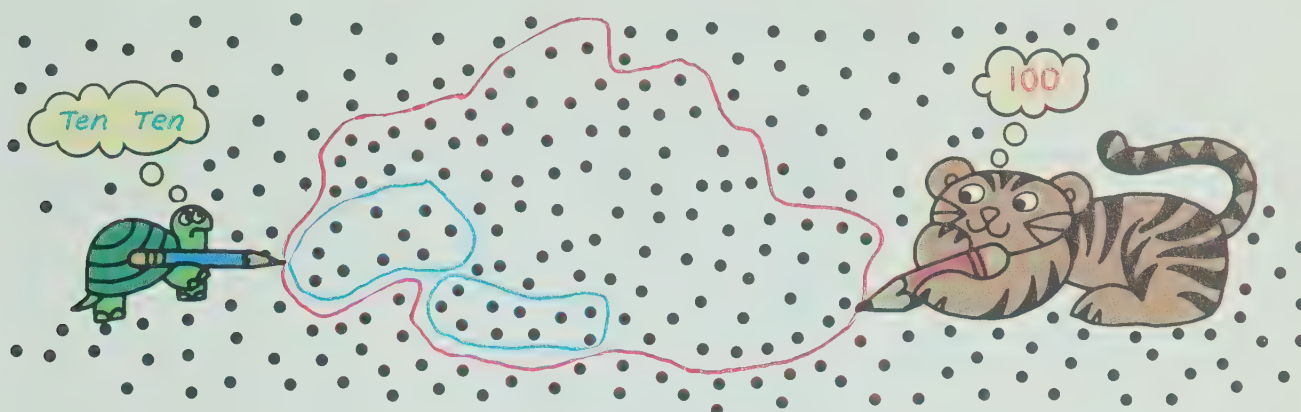
+	+	+	+
+	2	7	6
+	9	5	1
+	4	3	8
+			

+	+	+	+
+	35	10	15
+	0	20	40
+	25	30	5
+			

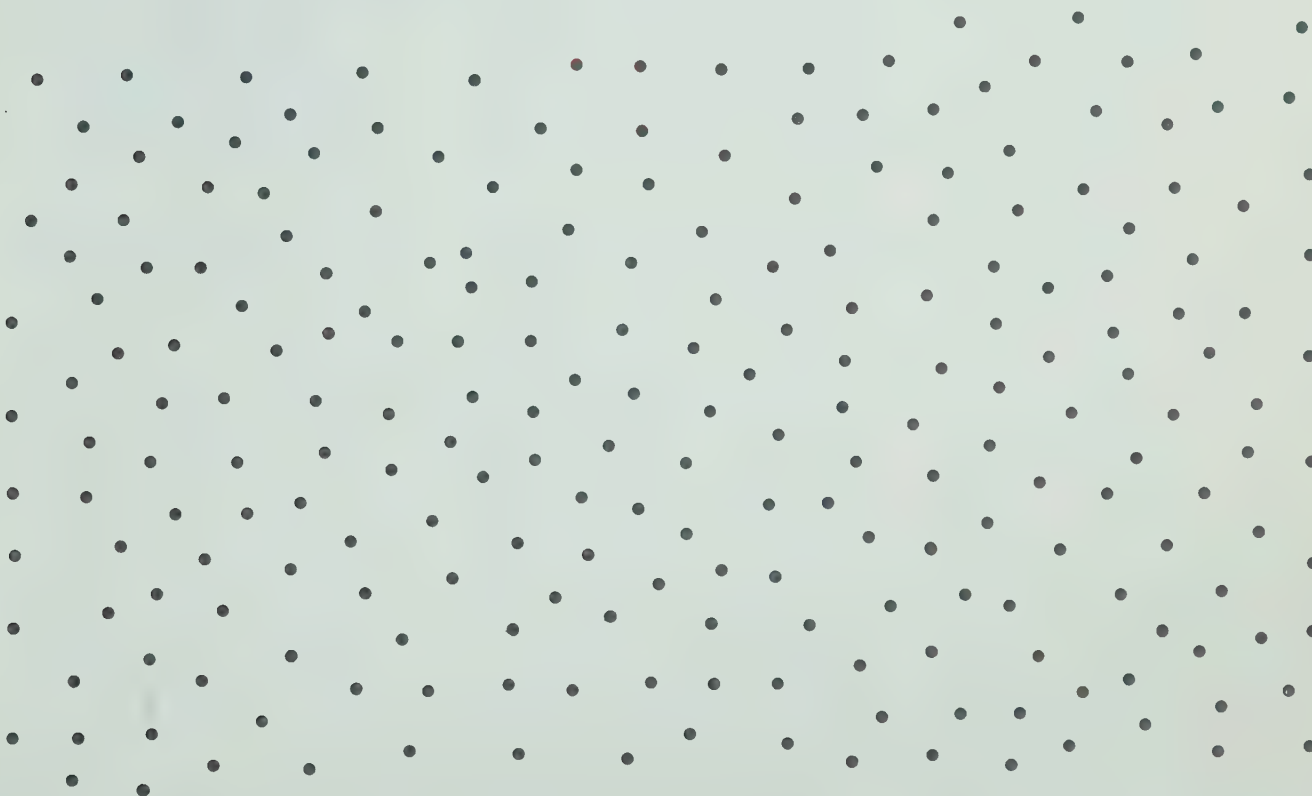
Find the missing numbers. Make the squares “magic.”

+	+	+	+
+	7	0	
+		4	6
+	3	8	1
+			

+	+	+	+
+	40	90	20
+		50	70
+	80		60
+			



Without counting, draw a ring around what you would guess to be **100** dots.

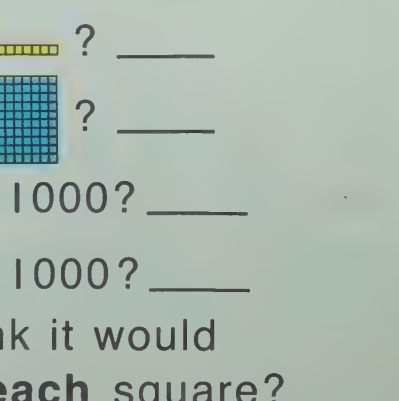
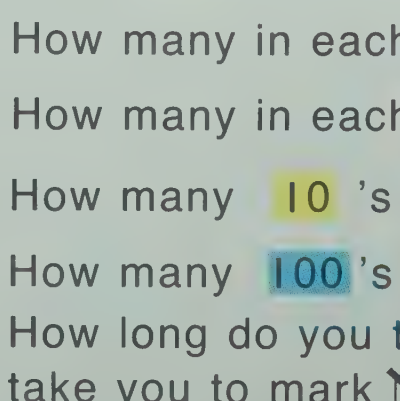
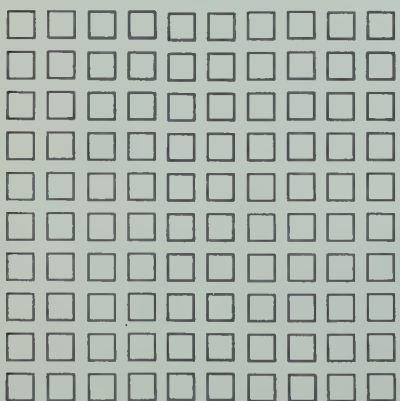
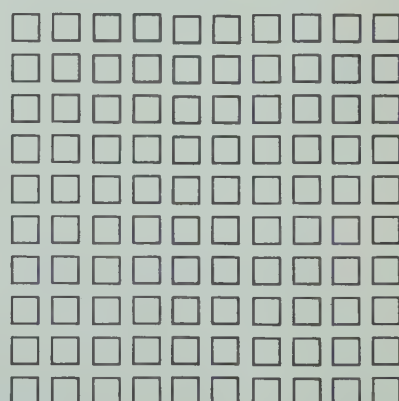
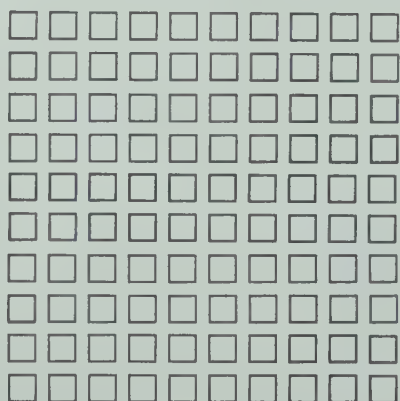
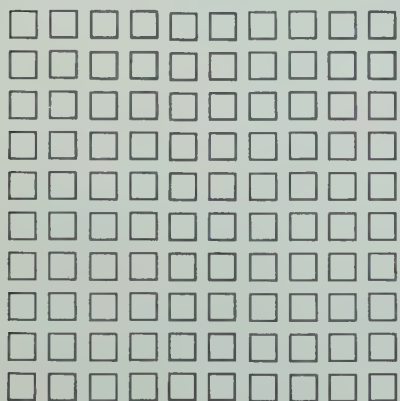
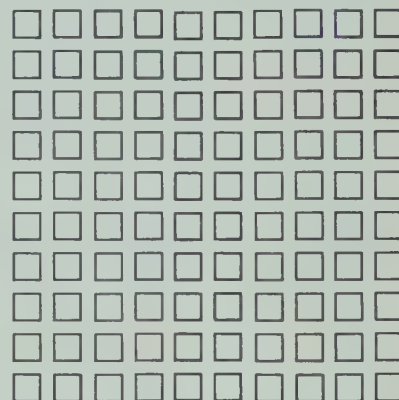
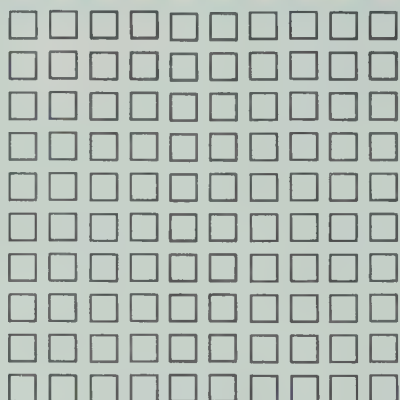
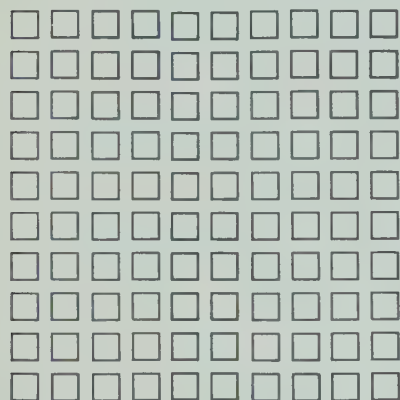
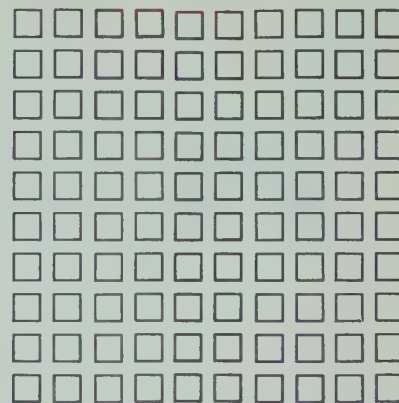
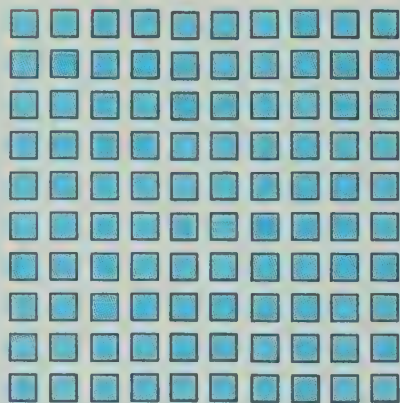
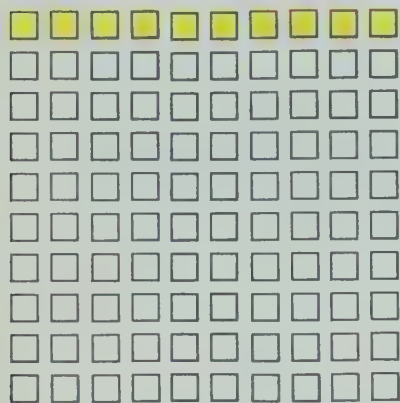


How many dots did you ring? _____


How many more or less
than **100** dots did you ring? _____

How many sets of **10** dots did you ring? _____

Here are **one thousand** squares \square . We write **1000**.




How many in each  ? _____

How many in each  ? _____

How many **10** 's in 1000? _____

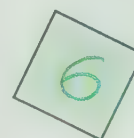
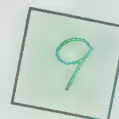
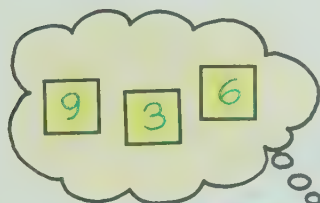
How many **100** 's in 1000? _____

How long do you think it would take you to mark  **each** square? _____

How many different 3-digit numerals can you make using these digits?

Cut out slips of paper and try it.

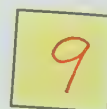
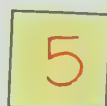
List the numerals you find.



936

Which is the largest? _____ Which is the smallest? _____

Write all the different 4-digit numerals you can make using these digits.



Which is the largest? _____ Which is the smallest? _____

Which is the closest to this year's date ? _____

Think of all the 3-digit numerals as you can using these digits. List them in order from the smallest to the largest.

4

2

7

274

smallest

largest

Think of all the 1, 2, and 3-digit numerals using these three digits. List them in order from the smallest to the largest.

8

2

5

5

smallest

85

528

largest

Think of all the 4-digit numerals using these digits.

List them in order from the smallest to the largest.

6

2

9

5

2659

smallest

9625

largest

Find the sums.

$$\begin{array}{r} 643 \\ + 329 \\ \hline \end{array}$$

$$\begin{array}{r} 527 \\ + 248 \\ \hline \end{array}$$



$$\begin{array}{r} 12 \\ 60 \\ 900 \\ \hline 972 \end{array}$$

$$\begin{array}{r} \\ \\ \\ \hline \end{array}$$

$$\begin{array}{r} 356 \\ + 279 \\ \hline \end{array}$$

$$\begin{array}{r} 367 \\ + 578 \\ \hline \end{array}$$

$$\begin{array}{r} 496 \\ + 384 \\ \hline \end{array}$$

$$\begin{array}{r} 978 \\ + 765 \\ \hline \end{array}$$

$$\begin{array}{r} \\ \\ \\ \hline \end{array}$$

$$\begin{array}{r} \\ \\ \\ \hline \end{array}$$

$$\begin{array}{r} \\ \\ \\ \hline \end{array}$$

$$\begin{array}{r} \\ \\ \\ \hline \end{array}$$

$$\begin{array}{r} \\ \\ \\ \hline \end{array}$$

$$\begin{array}{r} \\ \\ \\ \hline \end{array}$$

$$\begin{array}{r} \\ \\ \\ \hline \end{array}$$

$$\begin{array}{r} \\ \\ \\ \hline \end{array}$$

Find the sums and missing numbers.

500	20	6	→ 526
300	40	2	→
↓	↓	↓	↓
800			

400	60	3	→
200	10	6	→
↓	↓	↓	↓

700	30	7	→
200	50	2	→
↓	↓	↓	↓

	30	5	→ 635
300			→
↓	↓	↓	↓
	70	8	→

1000	600	40	2	→
2000	300	30	8	→
↓	↓	↓	↓	↓

3000	400	10	6	→
4000	500	80	3	→
↓	↓	↓	↓	↓

Draw a figure that has .
Can you name the figure?

3 sides altogether.

No sides the same length.



triangle

4 sides the same length.

4 square corners.

2 sides the same length.

3 sides altogether.

A square corner.

3 sides altogether.

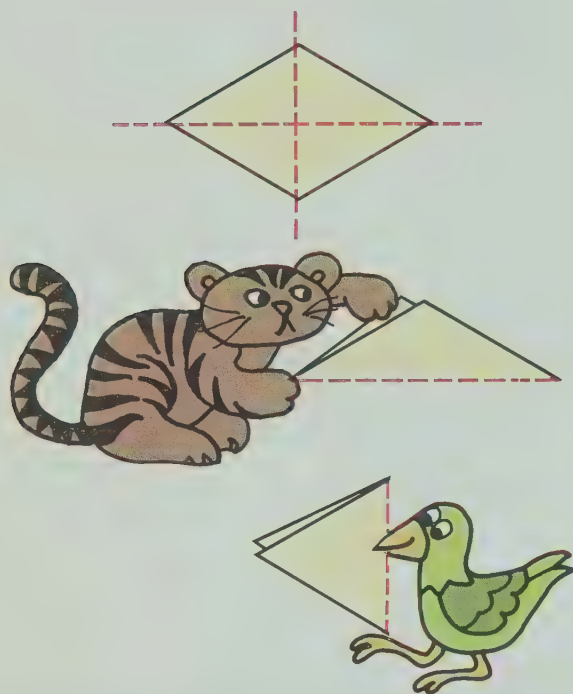
2 pairs of sides the same length.

4 square corners.

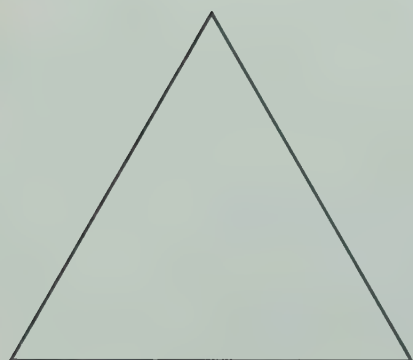
More than 4 sides.

All sides the same length.

Symmetric figures can be folded along a line of symmetry so that both halves match exactly. Each figure below has more than one line of symmetry. Draw as many lines of symmetry as you can for each figure.



Draw a figure of your own that has a symmetry line.



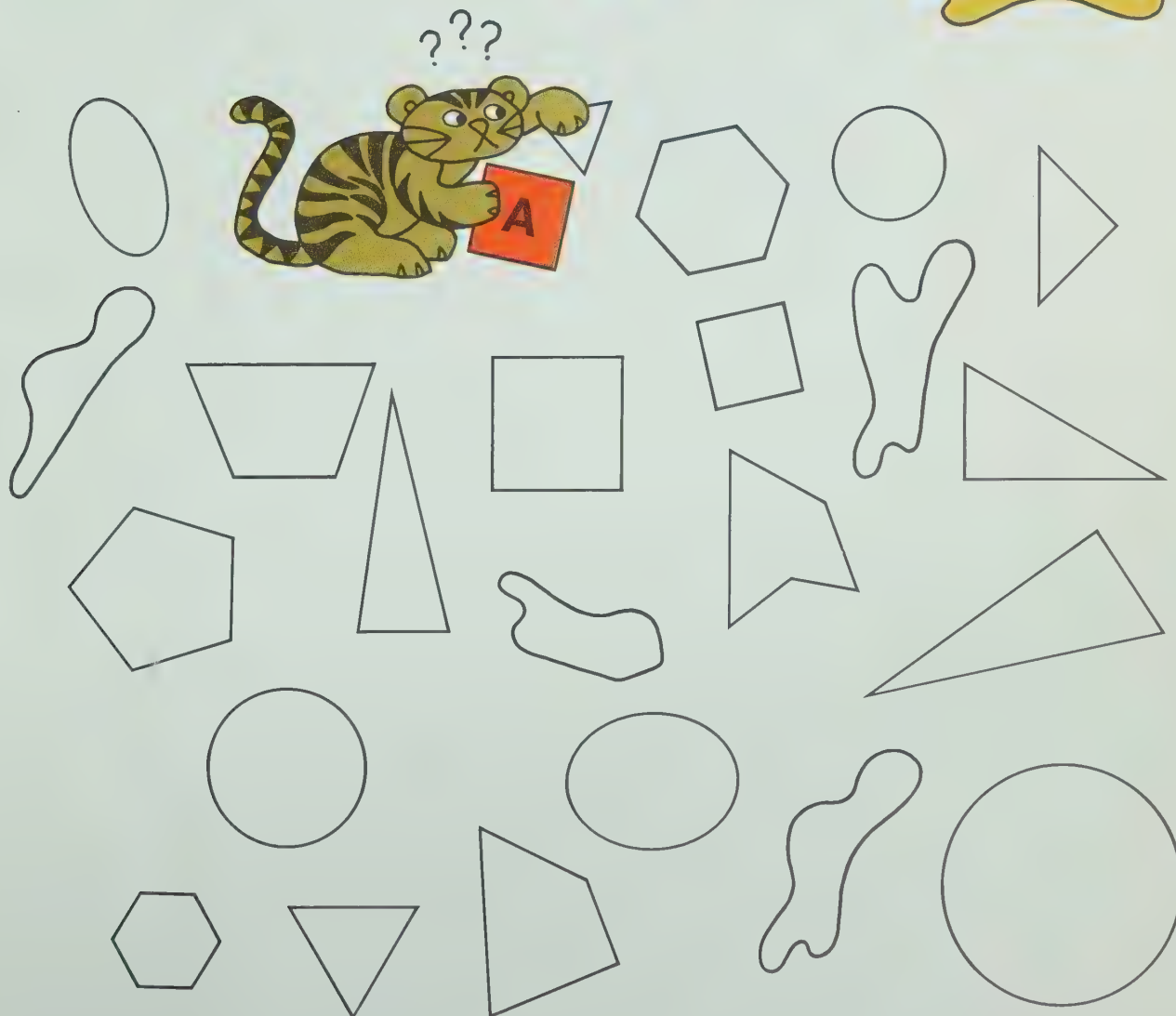
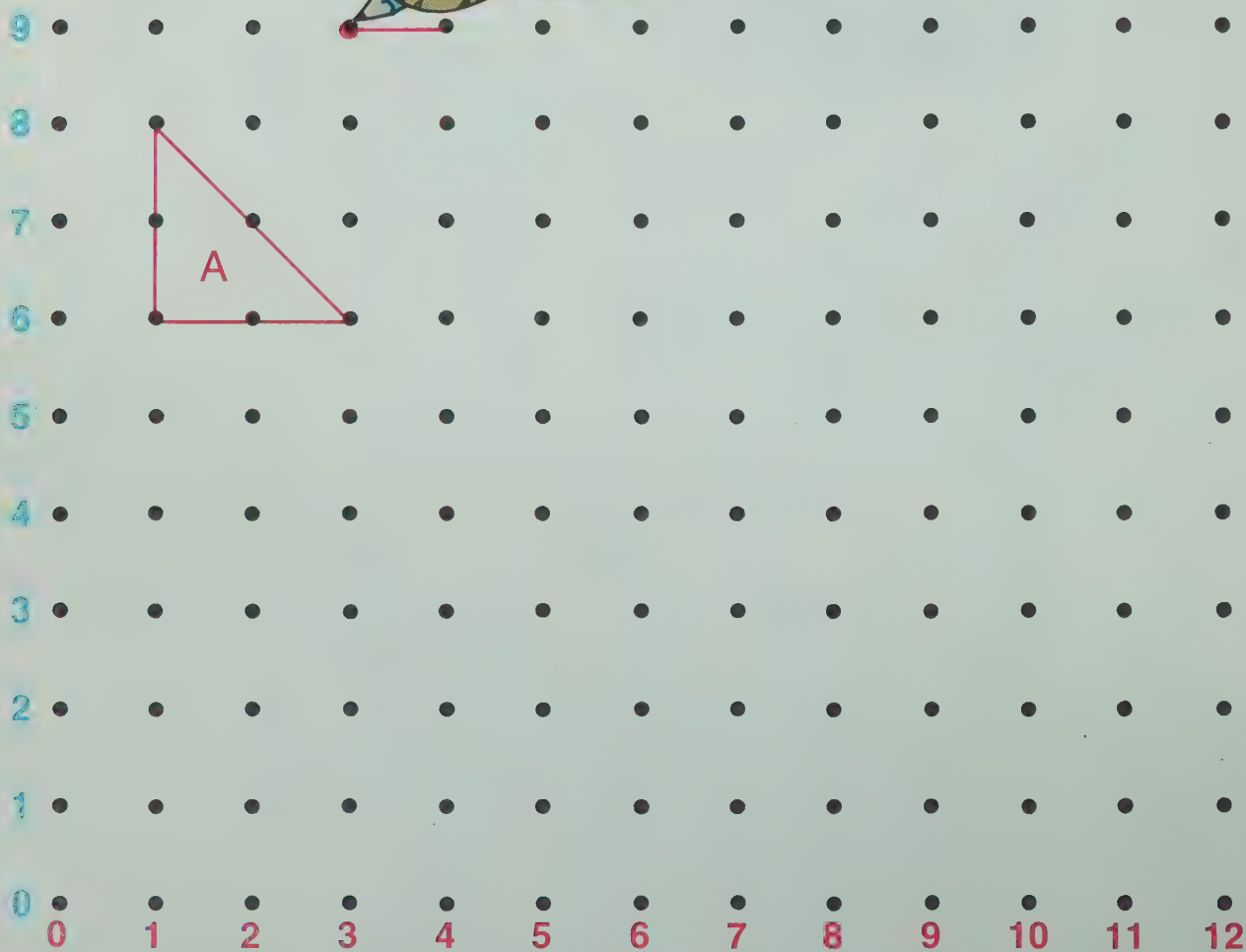
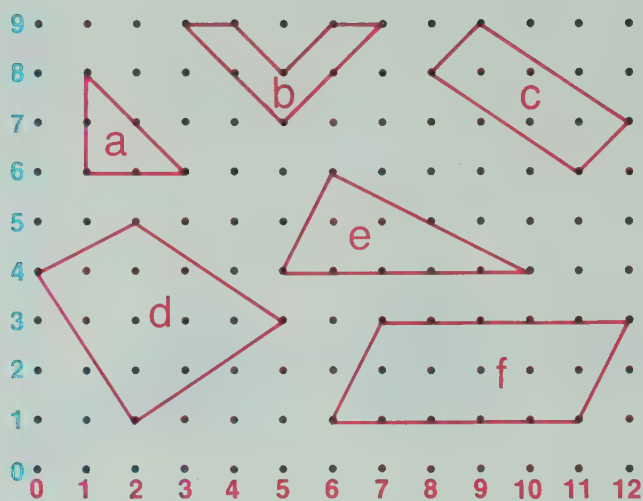


Figure **A** is **similar** to figure **a**.

On the grid below,
draw figures similar
to **b**, **c**, **d**, **e**, and **f**.

Put them in the same
position. Label your
Figures **B**, **C**, **D**, **E**,
and **F**.



Solve the equations.

Since $5 + 4 = \boxed{9}$,

I know $15 + 4 = \boxed{19}$.

Since $5 + 6 = \boxed{11}$,

I know $15 + 6 = \boxed{21}$.

Since $1 + 11 = \boxed{12}$,

I know $11 + 11 = \boxed{22}$.

Since $8 + 7 = \boxed{}$,

I know $28 + 7 = \boxed{}$.

Since $9 + 6 = \boxed{}$,

I know $39 + 6 = \boxed{}$.

Since $8 + 5 = \boxed{}$,

I know $58 + 5 = \boxed{}$.

Since $25 + 5 = \boxed{}$,

I know $25 + 6 = \boxed{}$.

Since $35 + 5 = \boxed{}$,

I know $35 + 7 = \boxed{}$.

Since $25 + 10 = \boxed{}$,

I know $25 + 9 = \boxed{}$.

Since $45 + 10 = \boxed{}$,

I know $45 + 8 = \boxed{}$.

Solve the equations.

Since $9 - 5 = \square$,

I know $19 - 5 = \square$.

Since $8 - 3 = \square$,

I know $38 - 3 = \square$.

Since $25 - 5 = \square$,

I know $25 - 6 = \square$.

Since $45 - 5 = \square$,

I know $45 - 7 = \square$.

Since $35 - 10 = \square$,

I know $35 - 9 = \square$.

Since $75 - 10 = \square$,

I know $75 - 8 = \square$.

Since $12 - 5 = \square$,

I know $22 - 5 = \square$,

Since $14 - 8 = \square$,

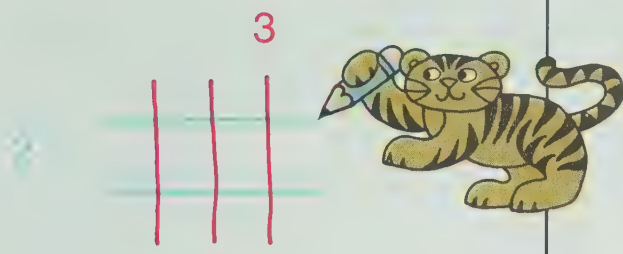
I know $34 - 8 = \square$.

Since $17 - 9 = \square$,

I know $57 - 9 = \square$.

Since $16 - 7 = \square$,

I know $86 - 7 = \square$.

Draw these lines Draw these lines	How many 's?	Multiplication equation
<p>3</p> 	<p>6</p>	<p>$\times 3 = 6$</p>
<p>2</p>		
<p>3</p>		
<p>3</p>		
Make your own.		

Find the sums. Then find the products.



$$7 + 7 + 7 + 7 + 7 + 7 = \square$$

How many
sevens? →

$$\square \times 7 = \square$$



$$8 + 8 + 8 + 8 + 8 + 8 + 8 = \square$$

How many
eights? →

$$\square \times 8 = \square$$

$$9 + 9 + 9 + 9 + 9 = \square$$

How many
nines? →

$$\square \times 9 = \square$$

$$6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 = \square$$

How many
sixes? →

$$\square \times 6 = \square$$

Make your own.

How many
_____? →

$$\square \times \square = \square$$

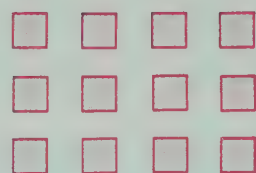
How many products can you find?
Write them in the table.

×	0	1	2	3	4	5	6	7	8	9
0										
1										
2							2 × 6 12			
3										
4										
5				5 × 3 15						
6										
7										
8										
9										

Do you see any interesting
number patterns in the table?
Color the squares to
show these patterns.



How many different equations can you write about these 12 squares? If you can, draw lines in each picture of squares to show your thinking.



$$3 \times 4 = 12$$

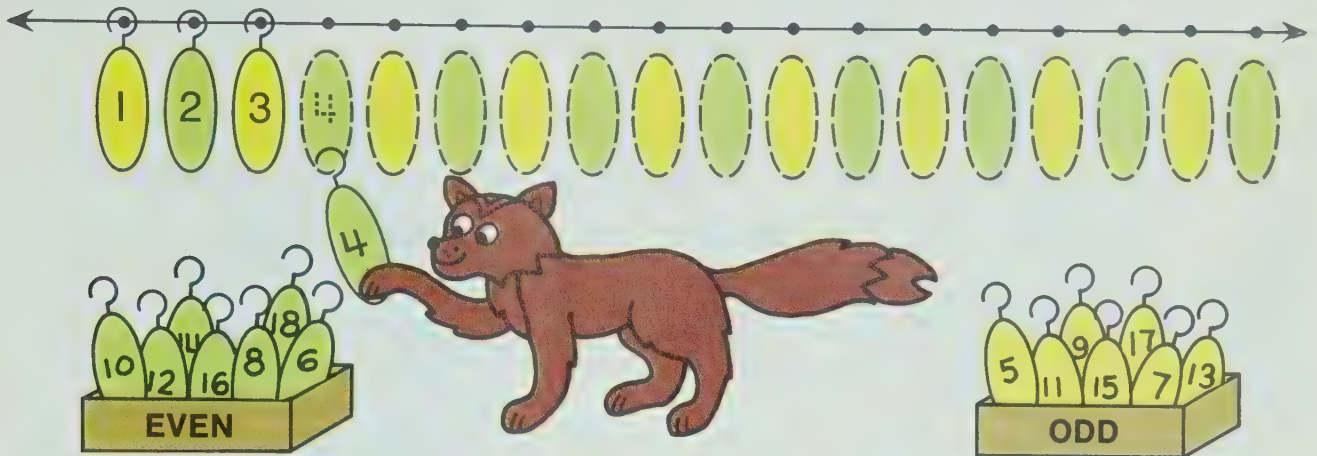


$$3 + 9 = 12$$



Use another sheet of paper if you find more.

Complete the number line.



Complete the addition tables.

+	1	3	5	7	9
1					
3					
5					
7					
9					

+	2	4	6	8	10
2					
4					
6					
8					
10					

The sum of two **odd** numbers is an _____ number.

The sum of two **even** numbers is an _____ number.

Is the sum of 43 and 39 **even** or **odd**? _____

Is the sum of 546 and 398 **even** or **odd**? _____

Is the sum of 7493 and 8697 **even** or **odd**? _____

Complete the tables.

+	2	4	6	8	10
1					
3					
5					
7					
9					

Adding odd and even numbers

The sum of an odd number and an even number is

an _____ number.

×	2	4	6	8	10
2					
4					
6					
8					
10					

Multiplying even numbers

The product of two even numbers is

an _____ number.

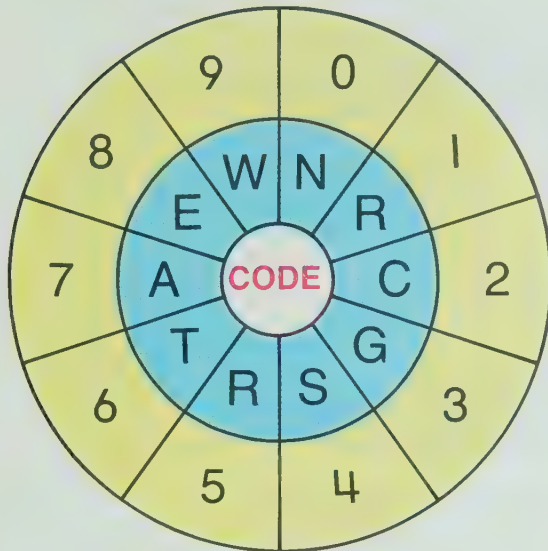
×	1	3	5	7	9
1					
3					
5					
7					
9					

Multiplying odd numbers

The product of two odd numbers is

an _____ number.

Write the sum or difference on yellow.
Use the code to put the letters on blue.



$$\begin{array}{r} 16 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 0 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 0 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 7 \\ \hline \end{array}$$



$$\begin{array}{r} 14 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 8 \\ \hline \end{array}$$

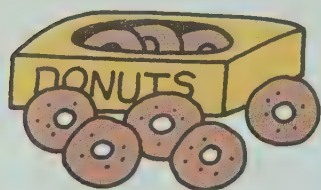
$$\begin{array}{r} 16 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 11 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 8 \\ \hline \end{array}$$

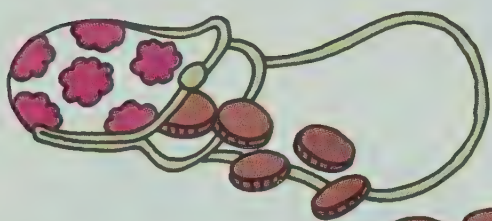
An equation and a picture are given. Write a short story problem to go with the picture and the equation. Finally, solve the equation.



$$12 - 5 = \square$$



Short story:



$$17 - 9 = \square$$

Short story:



$$16 - 7 = \square$$

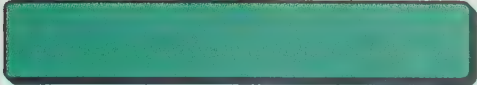

Short story:

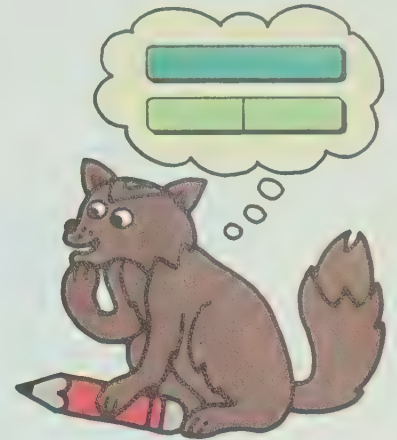




$$14 - 8 = \square$$



Short story:



Write the fraction.

If  is 1,
then  is $\frac{1}{2}$.




If  is 1,
then  is ____.

If  is 1,
then  is ____.

If  is 1,
then  is ____.

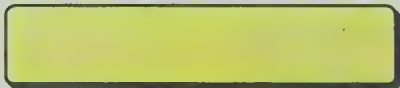

If  is 1,
then  is ____.



Write the fraction.


If  is 1,
then  is $\frac{1}{3}$.

If  is 1,
then  is $\frac{2}{2}$.

If  is 1,
then  is $\frac{1}{5}$.

If  is 1,
then  is $\frac{3}{4}$.

If  is 1,
then  is $\frac{2}{3}$.

If  is 1,
then  is $\frac{7}{8}$.

Follow the directions.

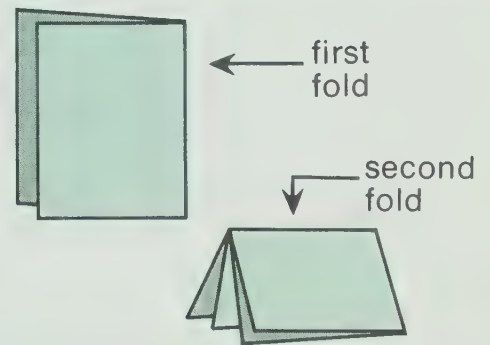
Fold a piece of paper once.
Unfold it. How many
parts do you see? _____

Color the paper to show $\frac{1}{2}$.



Fold a piece of paper twice.
Unfold it. How many
parts do you see? _____

Color the paper to show $\frac{3}{4}$.



Fold a piece of paper three times.
Unfold it. How many
parts do you see? _____

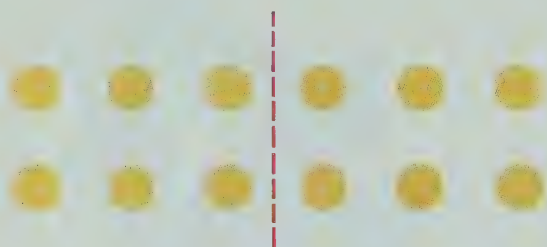
Color the paper to show $\frac{1}{8}$.



Fold another piece of paper three
times. Unfold it.
Color the paper to show a fraction.

What fraction did you show? _____

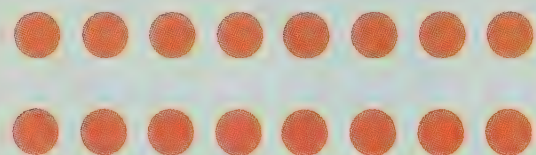
Divide each set into halves, thirds, fourths, fifths, or sixths.
Then complete each sentence.



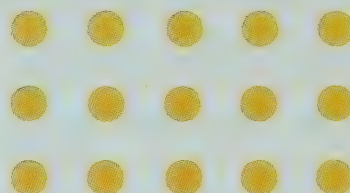
One half of 12 is 6.



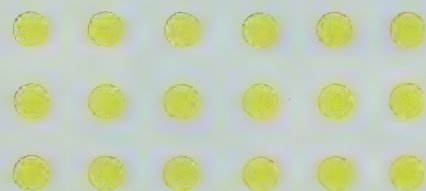
One third of 12 is ____.



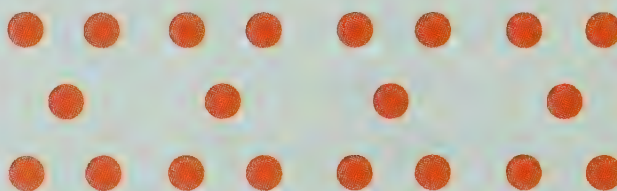
One fourth of 16 is ____.



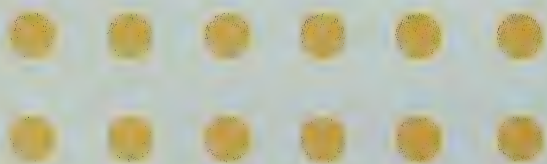
One fifth of 15 is ____.



One third of 18 is ____.



One fourth of 20 is ____.



One sixth of 12 is ____.

Make your own

One ____ of ____ is ____.



Use the pictures above or real containers to complete the sentences. Write a whole number in each .
Write a fraction in each .

It takes cups to fill a pint.

A cup is of a pint.

It takes pints to fill a quart.

A pint is of a quart.

It takes quarts to fill a gallon.

A quart is of a gallon.

It takes cups to fill a quart.



A cup is of a quart.

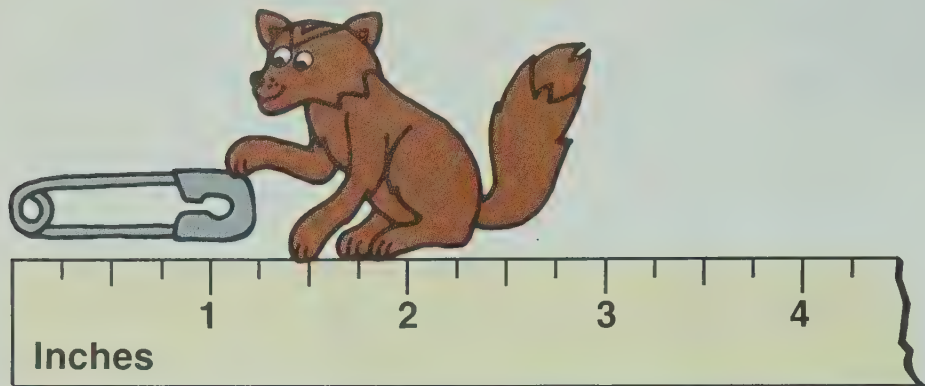
It takes pints to fill a gallon.



A pint is of a gallon.

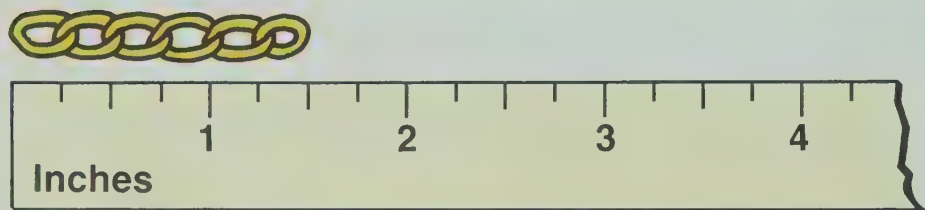
It takes cups to fill a gallon.



A cup is of a gallon.

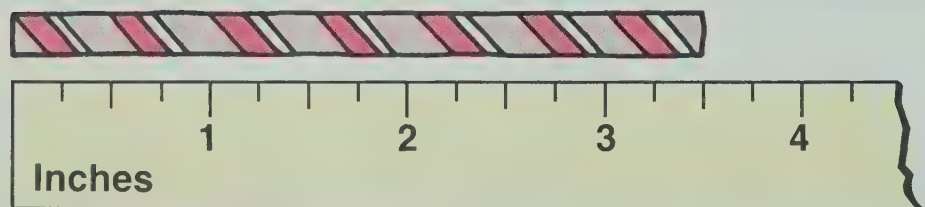
Measure the object above each ruler.
Give a whole number for each 
and a fraction for each .





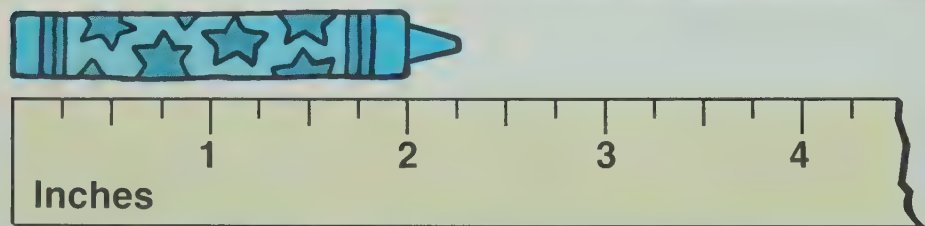
 and 
inches long





 and 
inches long

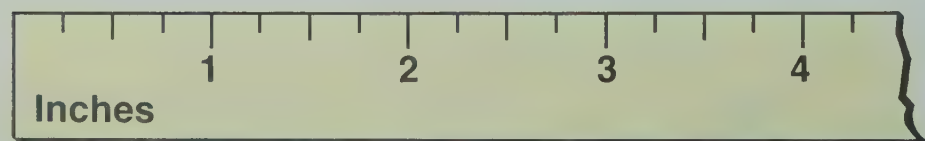




 and 
inches long



 and 
inches long

Find an object of your own to measure.



 and 
inches long

Find the sums.

$$\begin{array}{r} 345 \\ + 438 \\ \hline \end{array}$$

$$\begin{array}{r} 276 \\ + 418 \\ \hline \end{array}$$

$$\begin{array}{r} 527 \\ + 269 \\ \hline \end{array}$$

$$\begin{array}{r} 324 \\ + 949 \\ \hline \end{array}$$

$$\begin{array}{r} 272 \\ + 483 \\ \hline \end{array}$$

$$\begin{array}{r} 196 \\ + 452 \\ \hline \end{array}$$

$$\begin{array}{r} 567 \\ + 385 \\ \hline \end{array}$$

$$\begin{array}{r} 568 \\ + 779 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ 36 \\ + 48 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ 35 \\ + 47 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ 47 \\ + 63 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ 51 \\ + 67 \\ \hline \end{array}$$

$$\begin{array}{r} 26 \\ 57 \\ + 24 \\ \hline \end{array}$$

$$\begin{array}{r} 56 \\ 37 \\ + 72 \\ \hline \end{array}$$

$$\begin{array}{r} 49 \\ 65 \\ + 27 \\ \hline \end{array}$$

$$\begin{array}{r} 86 \\ 75 \\ + 48 \\ \hline \end{array}$$

Make up five addition problems.
Ask a friend to find the sums.

Find the differences.

$$\begin{array}{r} 852 \\ - 327 \\ \hline \end{array}$$

$$\begin{array}{r} 743 \\ - 218 \\ \hline \end{array}$$

$$\begin{array}{r} 964 \\ - 446 \\ \hline \end{array}$$

$$\begin{array}{r} 687 \\ - 239 \\ \hline \end{array}$$

$$\begin{array}{r} 839 \\ - 454 \\ \hline \end{array}$$

$$\begin{array}{r} 726 \\ - 273 \\ \hline \end{array}$$

$$\begin{array}{r} 948 \\ - 475 \\ \hline \end{array}$$

$$\begin{array}{r} 637 \\ - 492 \\ \hline \end{array}$$

$$\begin{array}{r} 924 \\ - 567 \\ \hline \end{array}$$

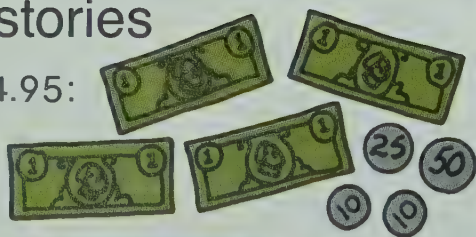
$$\begin{array}{r} 835 \\ - 269 \\ \hline \end{array}$$

$$\begin{array}{r} 851 \\ - 481 \\ \hline \end{array}$$

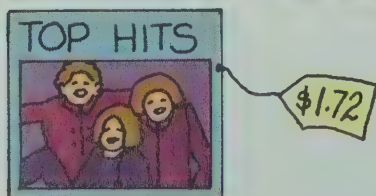
$$\begin{array}{r} 635 \\ - 297 \\ \hline \end{array}$$

Short stories

Had \$4.95:



Bought:



How much money left? _____

Had \$6.66:



Bought:



How much money left? _____

The centigrade thermometer is often used where people use the metric system of measurement.

Draw a line to show each temperature on the thermometer.

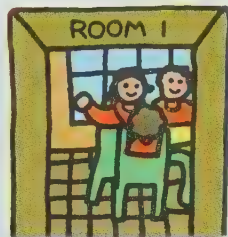
Boiling
water

100° above 0



Classroom
temperature

20° above 0



High
fever

39° above 0



Very cold
day

20° below 0

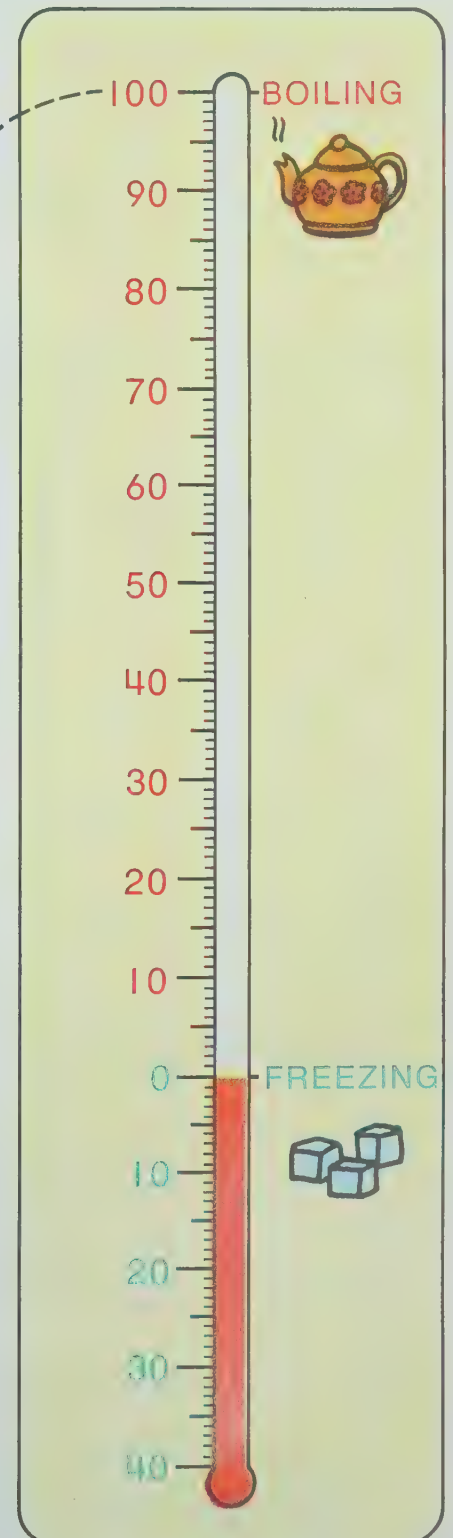


Hot
bath

50° above 0



CENTIGRADE THERMOMETER



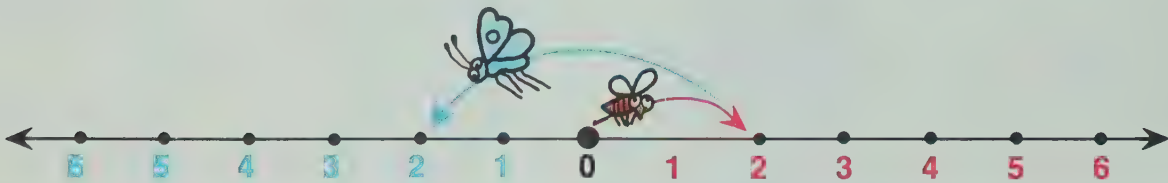
Here is a new picture of the number line.



Think of the blue numerals as “below 0”.

Think of the red numerals as “above 0”.

Start at 0. Jump 2, then 4. Where did you end? 2



Use colored pencils to show your answers.

If the answer is “below 0”, use blue.

If the answer is “above 0”, use red.



Start at 0. Jump 2, then 1. End at ____.




Start at 0. Jump 2, then 3. End at ____.



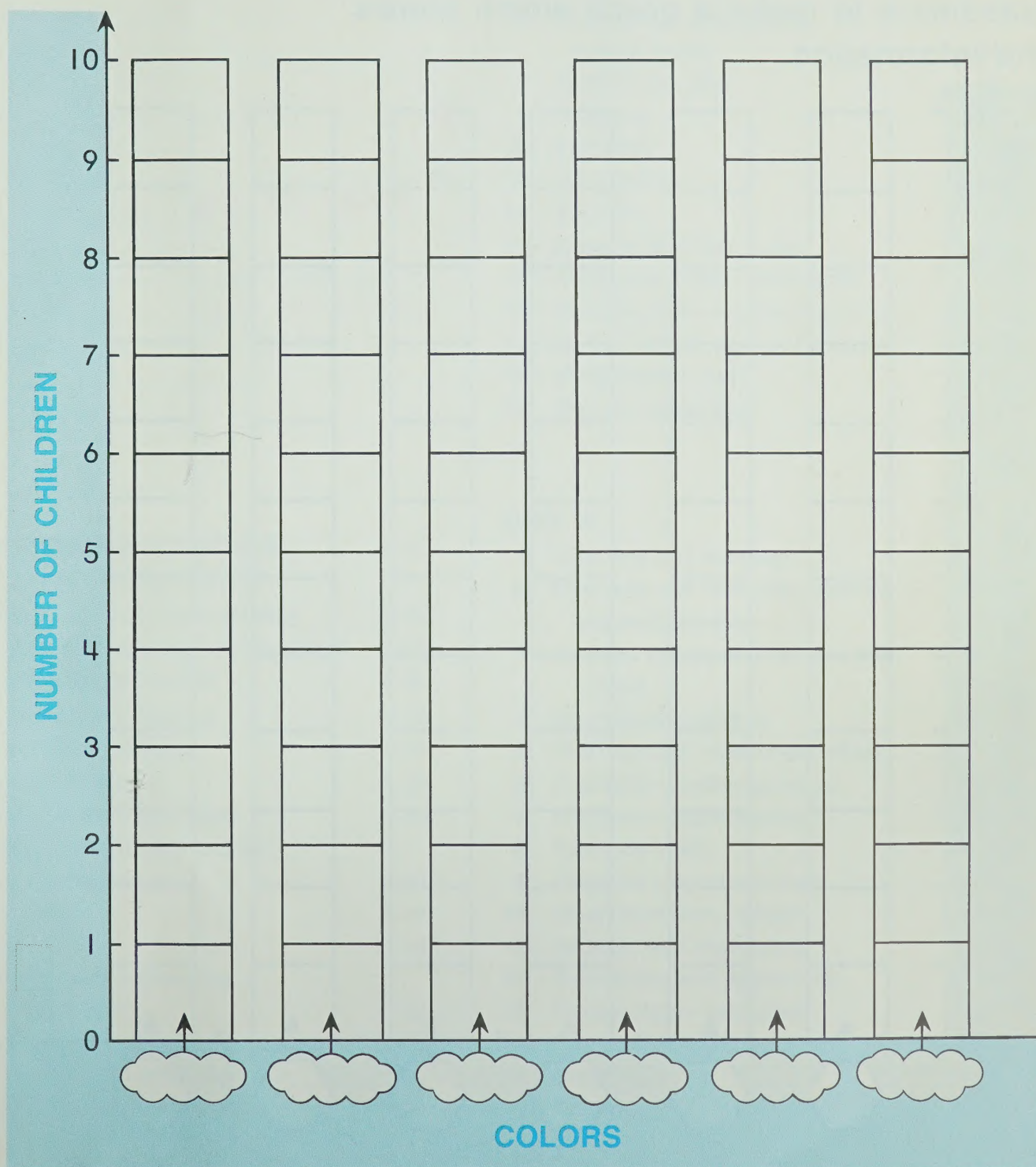
Start at 0. Jump 2, then 4. End at ____.




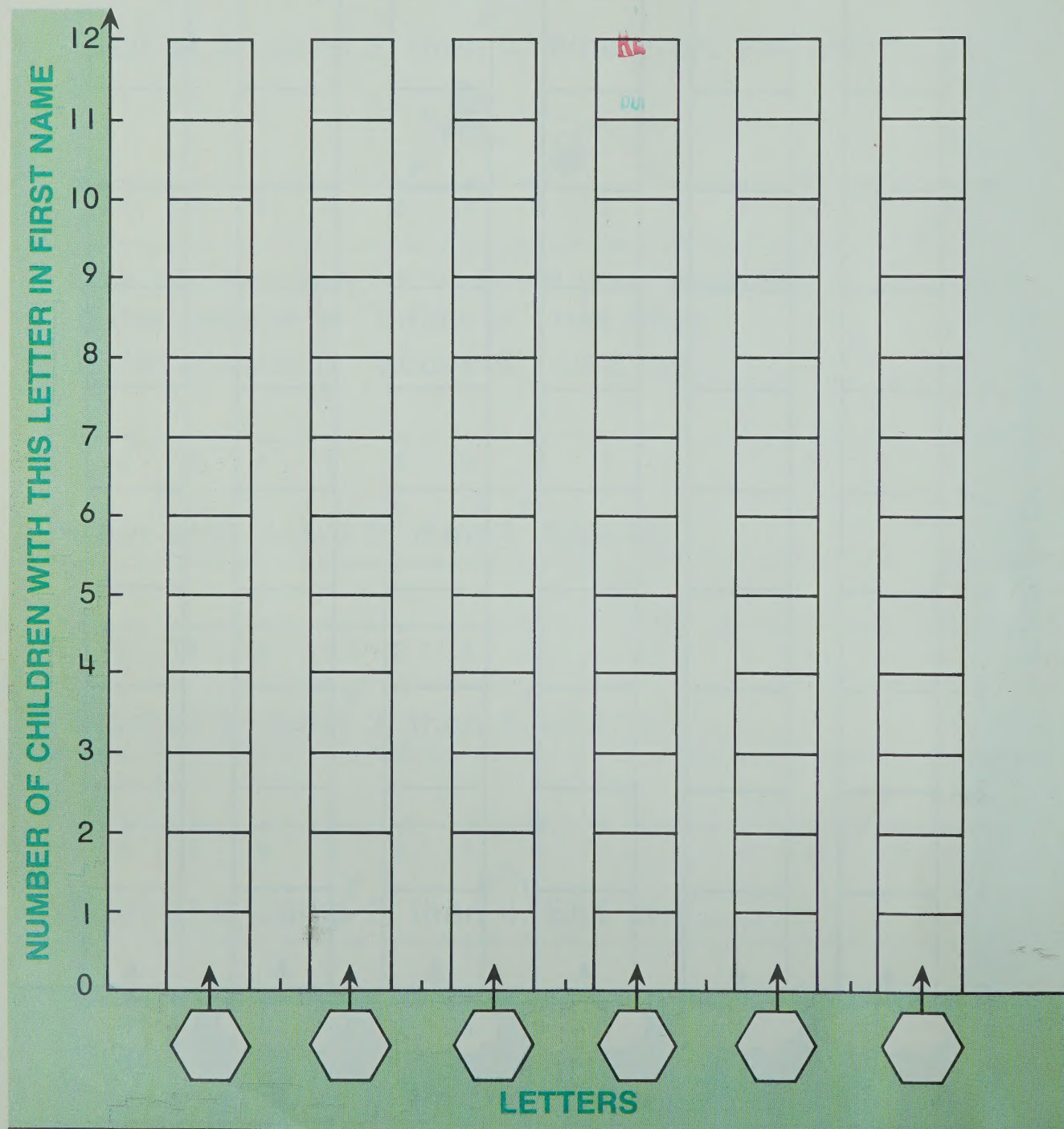
Start at 0. Jump 4, then 3. End at ____.

Choose 6 colors and color each  below.
Ask your classmates which of the colors
they like best.

Then color one square for each classmate to
make a graph which shows the information.



Choose 6 letters of the alphabet.
Write one of them in each  below.
How many classmates have each letter
in their first name?
Write a letter in a square for each
classmate to make a graph which shows
the information.





000028386332

UNIT G

page	To follow text page	Booklet page	To follow text page
1 Skip counting	e-8	1 Concept of one hundred	g-6
2 Counting and order	e-8	2 Concept of one thousand	g-6
3 2-digit numerals	e-10	3 3- and 4-digit numerals	g-12
4 3-digit numeral	e-10	4 Order of numbers	g-12
5 Inequalities (3-digit numerals)	e-22	5 Addition with regrouping (partial sums)	g-20
6 Inequalities (3-digit numerals)	e-22	6 Addition practice	g-20
7 Combinations of coins	e-30	7 Polygons	g-27
8 Dollars and cents; Inequalities	e-30	8 Symmetry	g-27
9 Counting by fives	e-36	9 Congruence	g-30
10 Telling time	e-36	10 Similarity	g-32
11 Sums—number line	e-46	11 Reasoning to find sums	g-37
12 Differences—number line	e-50	12 Reasoning to find differences	g-37
13 Sums, differences, missing addends	e-52	13 Multiplication—intersecting lines	g-55
14 Writing and solving equations	e-52	14 Multiplication—repeated addition	g-55
15 The inverse relation (multiples of 10)	e-58	15 Multiplication facts	g-59
16 Story problems—writing and solving equations	e-60	16 Sets and equations	g-59

UNIT F

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4 Column addition—look for hundreds	f-21
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6 Computational practice	f-30
7 Short story problems	f-34
8 Mystery problems	f-34
9 Measurements and “units”	f-40
10 Linear measurement (inches and centimeters)	f-40
11 Perimeter	f-42
12 Area	f-44
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14 Addition and subtraction—regrouping	f-53
15 Reconstruction problems	f-59
16 Computational practice	f-59

UNIT H

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2 Even and odd numbers—addition and multiplication	h-6
3 Addition and subtraction practice —code	h-18
4 Short story problems	h-18
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8 Fractions—sets	h-28
9 Fractions—liquid measure	h-28
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13 Temperature—centigrade	h-64
14 Introduction to integers	h-64
15 Graphing	h-64
16 Graphing	h-64

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